

THE FIFTH FRONTIER WAR

ARMIES OF THE FIFTH FRONTIER WAR



TRAVELLER®

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CONTENTS

INTRODUCTION	003
TRAVELLERS AND THE MILITARY	007
THE FIFTH FRONTIER WAR	019
MILITARY ORGANISATION	031
WEAPONS AND EQUIPMENT	042
THE UNIFIED ARMIES OF THE IMPERIUM	078
THE ARMIES OF THE ZHODANI CONSULATE	126
GROUND FORCES OF THE SWORD WORLDS CONFEDERATION	153
GROUND FORCES OF THE DARRIAN CONFEDERATION	161
INDEX	167

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INTRODUCTION

The Fifth Frontier War is generally seen as primarily a naval conflict but without control of populations naval victories are meaningless. Naval forces are capable of turning cities into slag and should the conflict become one of total destruction, such devastation might be inflicted on a frequent basis. There is no indication this will transpire, so both sides will need to secure population centres in order to make their naval victories count. It is a reasonable generalisation that ground operations are impossible without naval forces and naval operations are pointless without a ground campaign.

Without boots on the ground, to use an ancient term, gains made by the naval forces can quickly be lost to insurrection and rebellion. This may or may not matter all that much; minor worlds are typically not worth a lot at the negotiating table unless they occupy a strategic location. It may be that it is preferable to bypass some worlds, leaving their ground forces to 'wither on the vine' without support, or to demand surrender from orbit in the knowledge that it will not be honoured if the tide of the naval war turns.

There are conventions surrounding the surrender of world governments which are generally honoured. A government that surrenders is officially expected to remain in a state of surrender unless relieved by friendly forces or control is otherwise lost. This can mean naval units pushing the enemy out of the system or a successful uprising takes place. The surrendered government is expected to try to suppress rebellion and maintain order, and occasionally this actually happens. More commonly the world government sorrowfully declares that it has no influence over the rebels and simply cannot maintain control on behalf of its conquerors. This polite fiction is usually accepted providing there are (real or apparent) changes in the government afterwards.

The usual legal argument is that the surrender was no longer valid due to the obvious inability of the enemy to maintain control. This translates as 'we do not have to stay surrendered if you cannot be bothered to enforce it'. Again, this is generally accepted by large states and can have some bearing on post-war negotiations. The answer to this is of course to deploy occupation forces but before these can begin locking down the world any serious armed opposition must be suppressed.

This leads to a pattern of conflict which repeats itself in many locations. Naval forces push their opponents out of the system, aerospace defences are suppressed, then a ground campaign secures major population and governmental centres. An occupation force is left behind to mop up pockets of resistance and the main ground forces move on to their next target. At least, this is the ideal. Given the scale and scope of the conflict it is common for the ground forces to become bogged down in a conventional ground war for an extended period, until finally the enemy collapses from lack of supplies and reinforcements. Even then there may be persistent insurgencies.

The upshot of this is that the ground forces can end up stretched very thin, struggling to end multiple campaigns despite the official front lines being several parsecs away. A protracted resistance absorbs resources and requires support from bases in other star systems. This in turn requires the logistics vessels to be protected from raiders. Since the assigned units are not available for the naval campaign, a determined ground defence can influence the course of the naval war in ways that are not always immediately apparent.

It is common to glamourise the navy and look down on the army as more of a clean-up crew than a warfighting force but the reality is that all operations are interrelated at some level and that it is the armies of the warring factions that will decide who holds the bargaining chips at the end of the war. The navy creates opportunities to win but it is the army that finalises the victory.

ZONES, NOT LINES

It is commonplace to speak of the 'front lines' and the 'rear areas' but a modern battlespace is more complex than that. On the local level, especially when a conflict has become bogged down, there may be clearly defined front lines with a zone of 'nobody's land' – *venchdlablr ste* in Zhodani, which translates as 'uncertain terrain' – between them. In a wider context it is more appropriate to think in terms of zones. This is mainly due to the increased mobility of forces at higher Tech Levels. Establishing a neat line, ensuring contact with neighbouring units, is a waste of time and effort if the enemy can fly grav vehicles around or over

TERMINOLOGY AND GENERALISATIONS

The major belligerent powers use different words, in different languages, to describe their armed forces. Some generalisation and use of standardised terminology is necessary for simplicity and the standard Imperial terms are used in most cases. It should be noted that these are generalisations – what an Imperial observer might refer to as a Zhodani battalion or brigade is not exactly the same thing as its Imperial equivalent. The Zhodani habit of moving units between formations – at all levels – means that a force considered equivalent to the Imperial brigade facing it today might be a mere placeholder tomorrow, whilst another brigade-equivalent has been expanded almost to the size of an Imperial division.

The Imperials, Sword Worlders and Darrians describe their forces in terms of size, capability and numbers whilst the Zhodani prefer to think in terms of the rank (and calibre) of officer required to direct operations at that level. An Imperial brigade will be commanded by a brigadier or someone holding that carting rank, whereas a Zhodani officer capable of directing a certain size will be assigned troops up to that level to create a force and may briefly be given more to handle if the circumstances merit it. The difference may be subtle but it can be significant.

it, or make a ballistic approach to a supposedly safe area by climbing to low orbit. Instead, military forces attempt to create well-defended zones where their logistics and support elements will be safe. Everything else is *venchdlabl'r ste'*, although there are degrees of control and challenge.

The key to this is control of aerospace. Enemy grav vehicles, aircraft, missiles and drones need to be kept out of a safe area, which requires powerful aerospace defences or aerospace warfare assets capable of intercepting an incursion. The difference here is that aerospace defences are essentially passive; they can attack anything entering their engagement envelope but cannot seek out targets beyond it. Aerospace warfare

formations, on the other hand, may be able to react to incursions or strike against the bases they are launched from. The latter capability is also sometimes provided by orbital weapons but an army unit cannot be certain orbital fire support will always be available.

A military force will attempt to establish strongholds, which are heavily enough defended that an enemy strike is likely to fail or suffer unacceptable casualties. Beyond the strongholds are bastions, areas where an attack is possible but will be costly. In between these is an area that can be strongly disputed and is highly dangerous for the enemy to venture into but which is not protected by a solid front line. Contact with enemy units is always possible in such areas, which are graded by importance and availability of forces to protect them. Beyond the strongly disputed zone is what would traditionally be termed nobody's land, where either side might temporarily control a region.

Objectives in nobody's land will usually be occupied just long enough to complete a mission or gain an advantage. For example, a river crossing might be captured to disrupt enemy movements or a ridge occupied to create a fire position. However, these areas may cease to be important as combat moves elsewhere, and defending them means moving in sufficient forces to create a bastion. If this is not done the occupying troops become a target for attack and may end up taking heavy casualties defending a location that no longer matters.

Fixating on holding ground is always a mistake in modern conflict, at least in military terms. It is almost always better to make an elastic defence, falling back to avoid the main enemy blow then counterattacking on favourable terms, than to fight for every hill and street corner. There are exceptions, such as when a position is protecting the flank of an operation, but even then the tactical situation is what is important, not the location itself.

Commanders who remember this do a lot better than those who want to measure victory by how much terrain they control. The problem is that political leaders often think in those terms and issue grandiose statements that 'not one step back' will be taken. This puts the military commanders in a difficult situation, although sometimes an area – or what it blocks access to – is sufficiently important that it must be held. This may not always be apparent to officers on the ground.



In a protracted conflict both sides will seek to destroy one another's fighting capability. This may mean eliminating forces but can also be accomplished by destroying supports such as logistics centres. The two can be complementary; threatening a supply nexus can force the enemy to accept battle on unfavourable terms, since losing it will be worse than taking a battering defending it.

The strongholds and bastions of the enemy are the ultimate goal if a world is to be taken but often these are not taken by the steady encroachment of the front line. Instead they fall suddenly, made vulnerable by defeats elsewhere or by spreading the defences too thin. The decision of what to defend, what to contest and what to harass is therefore one of the key assets in modern military command. The system of grading areas helps leaders keep track of what forces should be committed and where.

Ground forces have deployed to a world where they have created a stronghold around the starport (1) which is vital to moving supplies and reinforcements in. A major concentration of artillery and aerospace formations are available to defend this location as well as troops dug in and others ready to aggressively repel any incursion. Attacking the stronghold will result in major enemy casualties and is unlikely to succeed.

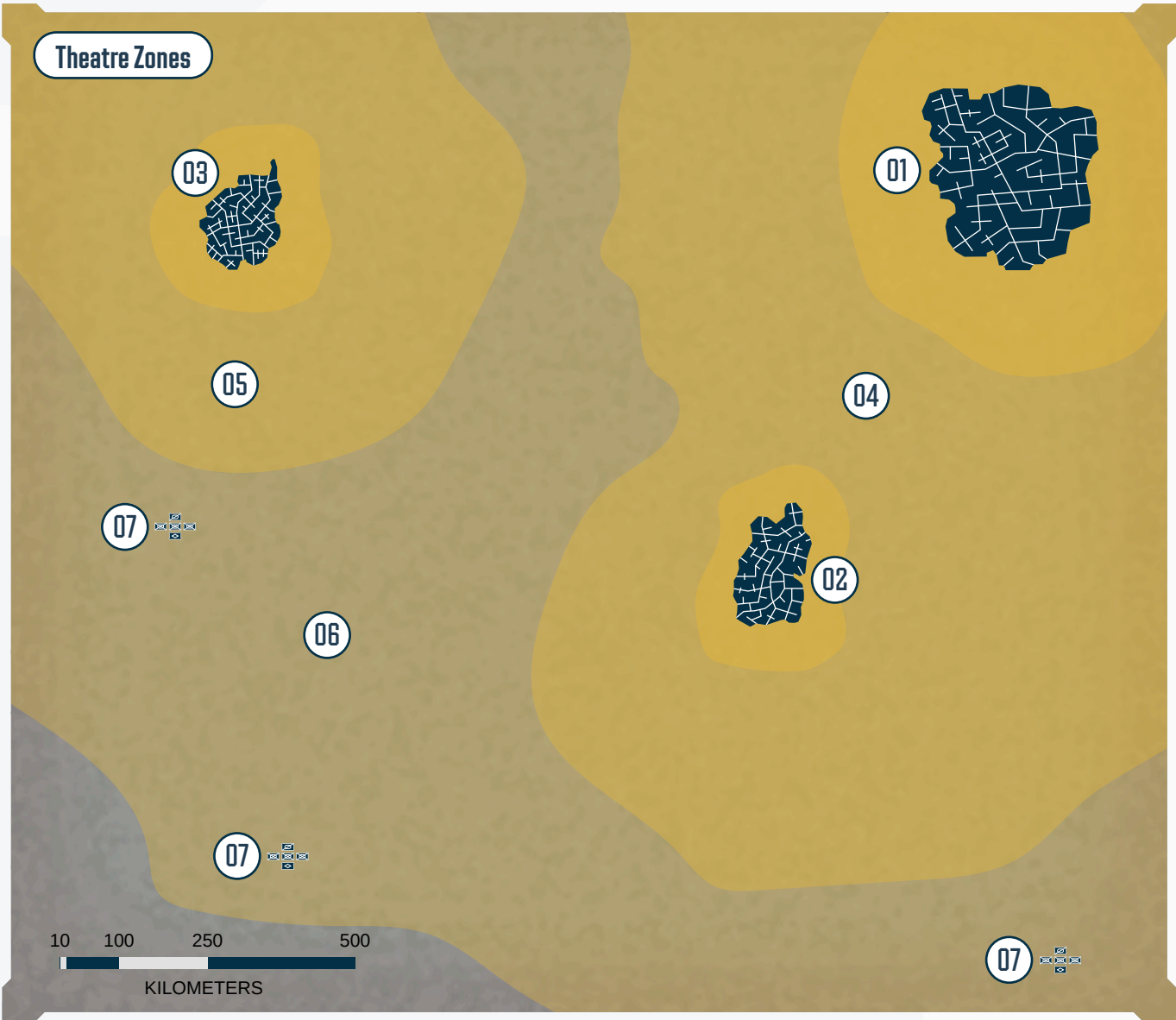
A bastion (2) has been created in a small city about 50 kilometres outside the stronghold, with a second major concentration of aerospace defences protecting an important marshalling base for operations throughout the region. A second bastion (3) is set up around an old mining complex, supporting offensive operations in the region. This bastion is important to offensive operations at present but may cease to be, in which case its forces will be reassigned. The closer bastion is part of the stronghold's defences and will be held if at all possible.

Around the stronghold and bastions are zones of importance (4) and (5), which are monitored and patrolled with forces ready to attack any incursion. It is reasonably safe to run a logistics convoy through these strongly disputed zones, although nothing is ever guaranteed. The wider area (6) is considered disputed, in that it is under loose control but not held in force. Some units (7) are deployed in this area to engage enemy incursions. Everything beyond the disputed area is uncontrolled and must be considered a potential combat zone.

There is no neat front line here; instead, a series of zones of decreasing control. An enemy force might penetrate deeply into the disputed area before being engaged and could even be permitted to take control of some objectives if this permits a more effective counterattack. This sort of elastic conflict is more complex than setting up a wall of defending units but overall it is far more effective.

Zone Types

Zone Type	Description	Likely Operations
Stronghold	Heavily defended area.	Repulse of attacks, support of field operations.
Bastion	Well defended area, requiring heavy enemy attack to reduce.	Repulse of attacks, forward base for operations.
Strongly Disputed	Forces available for aggressive response to enemy incursions, zone is generally safe for the movement of troops and supplies.	Patrols, logistics movements, some forces in place to defend key locations, aerospace defence concentrations.
Disputed	Area is important to current plans but is not held in force. Some forward deployed units and aggressive response to incursion likely.	Combat operations.
Hostile	Area is strongly disputed by the enemy.	Combat operations, raids, reconnaissance, strikes.
Enemy Held	Area is firmly held by the enemy.	Major attacks, harassment, reconnaissance.
Unclassified	The rest of the theatre.	Varies. Reconnaissance and minor combat operations are most likely.



TRAVELLERS AND THE MILITARY

Armies operate on a grand scale, changing the fate of worlds, and a Traveller is a tiny thing by comparison. However, the greatest army is made up of individual people. The deeds or inaction of one soldier will affect others and at times the outcome of a conflict has hung on the actions of a small group caught in the wrong place at the wrong time. It is here that Travellers can make a difference.

If the Referee wants to run a campaign where the Travellers are serving soldiers, they will have to contend with the fact that the average soldier has little agency most of the time. They can decide what target to shoot at and whether or not they throw a grenade, but they do not get to choose whether or not they will go out on patrol that day. Decisions are made by their superiors and they are expected to carry out their orders to the best of their ability. If ordinary soldiers are making decisions about whether or not to engage the enemy, something has gone seriously wrong and defeat is imminent.

What makes armies effective is that they are organised and their members act in concert to achieve great things. When they do not, chaos reigns. For this reason soldiers are trained to carry out certain actions a certain way and will be punished if they decide to go off and do their own thing. In extreme cases, they may be executed out of hand for deserting in the face of the enemy. Travellers serving in a military unit must accept that most of the time they will be doing what they are told, sometimes without knowing why, and never getting to ask 'what's in it for me?'.

The assumption in this case is that the Traveller already decided what was in it for them. They may be serving out of patriotism, or they may have signed up out of fear 'the other lot' were about to launch an invasion. They might have joined the military due to family pressure or to get away from a bad situation. The college and pension benefits might have seemed attractive... or they may have come from the sort of town where there are no other options.

Whatever their reason, serving Travellers are there when the fighting begins and are expected to do their duty. They can of course desert but that will bring with it a whole new set of problems. A campaign revolving around one or more deserters might be interesting, especially if they are the sort of rogues who will use the war to create opportunities. After all, who looks twice at a squad of soldiers behaving the same as all the others? An officer who needs some warm bodies for an unpleasant task, perhaps, but otherwise the Travellers might be able to blend in while they hatch their scheme to loot the planetary gold reserves.

Other Travellers might be associated with the military without being members. They might be civilians-turned militia caught in a war zone, or a merchant ship crew paid a handsome bonus to run supplies into a contested world. Even then, they may be constrained by the requirements of the military. The sergeant they are trying to ignore might indeed have no authority over them but that does not mean they will be permitted to do as they please.

The Travellers will have to contend with military security requirements. If there is a curfew in place, anyone caught out will be arrested and at least rigorously questioned. Those who do not stop and surrender when challenged are likely to be fired upon – the nervous young soldiers they have encountered cannot afford to assume the intruders are not Zhodani infiltrators! This will limit their options, or at least make some actions a lot more hazardous.

Travellers who are serving in a military force will find their options limited in terms of equipment. They will be expected to use what they are issued and will be issued what their state's military planners think soldiers will need. Many, but not all, superiors will turn a blind eye to that captured Imperial officer's gauss pistol but even if the Travellers manage to acquire a tank it will be taken from them and turned to whatever purpose their superiors think best.

Under normal circumstances Travellers can expect to be issued a full combat load, subject to availability and supply levels, and for the military to take care of needs such as maintenance of combat armour or three meals a day. In a protracted campaign the supply line might be stretched or disrupted, creating shortages or the occasional weird glut of something the Travellers did not ask for. Their lift infantry unit might one day take delivery of a large quantity of Imperial Navy dress uniform hats or something equally useless. This can occur due to glitches with the supply ordering system. It may be amusing or alarming – especially if what turns up is something dangerous like nuclear artillery shells – or aggravating if the Travellers are short of something important.

CARRYING STUFF

A full combat load is heavy. A Traveller will be equipped with personal armour, a primary weapon, probably a grenade and possibly a disposable anti-armour weapon. They will be issued around six magazines for their rifle or an equivalent amount of ammunition for a different weapon, plus may be expected to carry ammunition for a support weapon. On top of this are tools, rations, water, medical supplies and anything else the Traveller might need.

The basic load can be augmented with a few odd items – perhaps a pistol or some other light weapon for close encounters, an extra grenade or a custom-made battlefield survival pack containing high-energy snacks and other comforts. Superiors will not take much notice of a few extra items but the Referee should keep in mind the need to move quickly and fight effectively. How an item is carried can be as important as its weight; often bulky and heavy items are placed in a backpack that can be dropped if combat begins.

If the Travellers are realistic about what they are carrying, subject to the rule of thumb above, it may not be necessary to keep track of the precise weight. If a figure is required, page 98 of the *Traveller Core Rulebook* states that a Traveller can carry without penalty a number of kilograms of items equal to their STR plus END plus all ranks in Athletics (strength and endurance) they have. This of course assumes the item is not ridiculously bulky – a 3x3x3 metre cube of expanded polystyrene may not weigh much but it is not an easy thing to carry. Note that low gravity does not really change anything – items with a large mass still have inertia and momentum, and bulk is bulk.

Note that powered armour does not contribute to encumbrance when powered up and that the weight of worn armour is distributed so as to reduce its effective weight by 75%.

The following revised encumbrance rules are drawn from *Mercenary*. They are intended to supersede those presented in the *Traveller Core Rulebook*.

COMBAT LIGHT: ALL RANKS IN ATHLETICS (STRENGTH AND ENDURANCE) + STR + END

‘Combat Light’ represents the maximum load a Traveller can carry and still act without penalty. The load must still be carried in a plausible manner. For a fit and properly trained soldier, a combat light loadout will typically be around 16–18 kilograms of equipment.

COMBAT LOAD: 2X (ALL RANKS IN ATHLETICS (STRENGTH AND ENDURANCE) PLUS STR + END)

A soldier’s combat load is up to twice their ‘combat light’ load, so around 32–36 kilograms for a fit and well-trained soldier. At this level all physical actions that require significant movement are one difficulty level harder. A soldier doing something that requires only slight movement, such as shooting from cover, does not suffer this penalty but as a rule of thumb anything requiring more than a step or turn in place qualifies as ‘significant movement’. A soldier carrying combat load is considered to be performing heavy labour and will become fatigued as per page 80 of the *Traveller Core Rulebook*.

FIELD LOAD: 3X (ALL RANKS IN ATHLETICS (STRENGTH AND ENDURANCE) PLUS STR + END)

Soldiers are often overburdened with equipment they might or might not actually need. In addition to combat equipment, body armour and necessary personal kit the soldier will usually also be carrying additional food and water, some kind of field shelter and ammunition for support weapons or electronic equipment. Much of this additional equipment will be in or attached to a pack that can be quickly ditched in a fight, enabling the soldier to get down from field load to combat load or even combat light. Of course, this equipment might be lost if the unit is pushed back and cannot retrieve its packs. Field load is up to three times the soldier’s combat light load. At this level all physical tasks are considered one difficulty level harder whether they require significant movement or not. For a typical fit and well trained soldier field load is a maximum of 48–54 kilograms.

OVERBURDENED: BEYOND 3X (ALL RANKS IN ATHLETICS [STRENGTH AND ENDURANCE] PLUS STR + END)

It is physically possible to carry more than a standard field load and indeed some militaries have fitness requirements based on carrying a very large load for a certain distance. However, soldier performance is greatly degraded when lurching along under a gigantic pack. In addition to the penalty mentioned above the soldier suffers DM-1 on all tasks (of any kind) for every amount of weight equal to their STR in kilograms, or fraction thereof, they are carrying above their maximum field load.

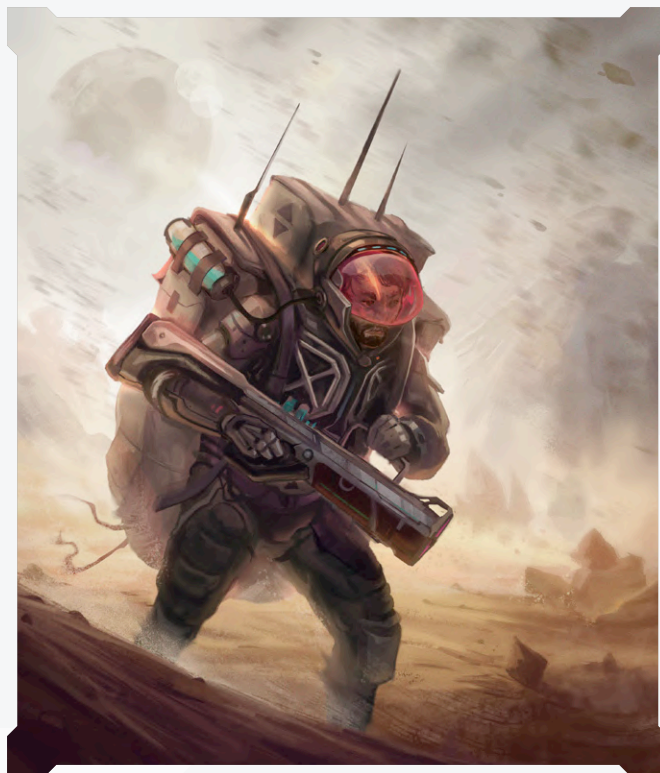
For example, a soldier has STR and END of 8, and Athletics (strength) 1. Their combat light load is 17kg, combat load is 34kg and maximum field load is 51kg. If this soldier is carrying 50kg all tasks are one difficulty level harder and they are considered to be carrying out heavy labour for the purposes of fatigue. If carrying 52–59kg they also suffer DM-1 on all checks. At 60kg this increases to DM-2 and continues to increase until the soldier is no longer capable of moving or even lifting their pack.

The Referee must also keep in mind the bulk of some items. Even something as relatively small as a rifle magazine has to be carried somewhere. A pack containing 20 loaded rifle magazines, at about 500 grams each, will weigh 10 kilograms but will also be quite bulky. Some weapons may be light enough to carry but be awkward to use. For example, an early plasma gun might be so large that it can only be fired from the hip or when resting on something, making movement slow despite the soldier still being within their combat load when using it.

RULES OF ENGAGEMENT

In many situations the rules of engagement will seem quite simple – the enemy can be engaged with any weapon the soldier has been issued, except for those where a special release order is required. That would normally apply to nuclear munitions – which the average soldier will not be carrying – and those that produce significant harmful radiation under certain circumstances. Normally, when a soldier is given a fusion gun it comes with presumed permission to use it but when there are noncombatants in the vicinity such high-energy weapons require a release order.

Clearance to use weapons also requires identification of the target. A sensor blip might not actually be an enemy vehicle, so there are rules regarding how much of an assumption the soldier can make. Under some



circumstances this is quite simple – ‘anything flying in that area is presumed hostile’ but when there are friendlies, civilians and neutral parties in the region, rules of engagement may require positive target identification.

When dealing with insurgents the situation can become even more complex, as hostiles will hide in plain sight among the innocent civilian population. Civilian casualties often lead to more insurgents joining the fight, so rules of engagement will usually be very strict. To the senior commanders this makes sense, since even if front-line troops are placed at greater risk by the rules, the overall situation will be made far worse by intemperate actions. Those at the sharp end will see it differently.

In some cases the rules of engagement allow the engagement of presumed hostiles, such as anyone seen with a weapon in an area where attacks have occurred in the past. Stricter rules may prohibit firing on anyone unless a threat is imminent. For example, if the Travellers see someone pull a grenade out of a bag they are allowed to fire on them until it is thrown. After that, the insurgent can amble away as the Travellers are not permitted to engage. They can go after the grenade-thrower and attempt an arrest but may not use their weapons except in self-defence. This kind of situation is extremely frustrating but the Travellers must obey the rules or face the consequences.

MILITARY GRAV VEHICLES

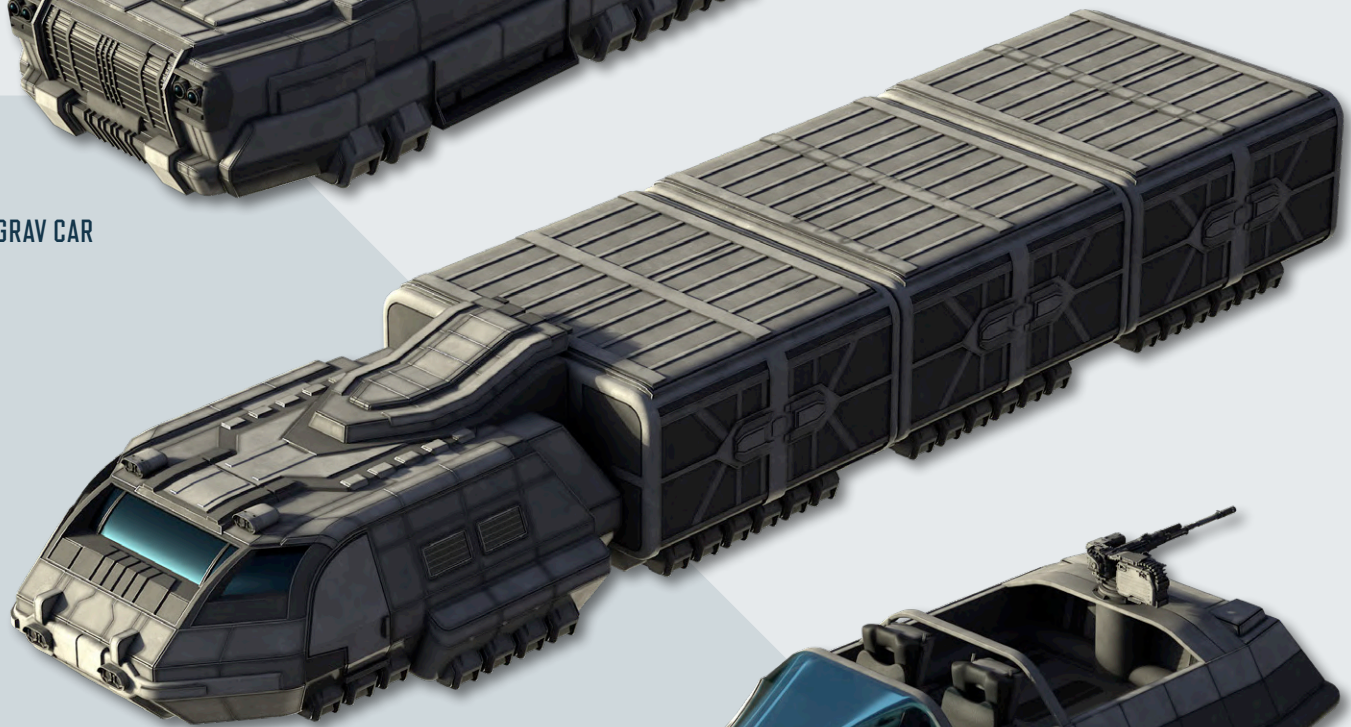
Grav vehicles are vital to modern warfare. They change the nature of conflict by being able to travel over land and sea equally well, and can function as aircraft as well. However, flying high exposes the vehicle to fire from all directions so most grav combat vehicles stay low to gain terrain cover. Military vehicles fall into certain general types, such as utility vehicles, armoured fighting vehicles, transports and general-purpose chassis that can be configured to a variety of roles. By far the greatest number of vehicles in a force's inventory will be intended for purposes other than direct engagement of the enemy.

SOFTSKINNED TRANSPORT

Any army needs to move people and items around, and to do it sufficiently cheaply that it can afford enough transport. Much use is made of 'militarised' versions of civilian vehicles such as grav cars, grav trucks and air/rafts. The meaning of the term militarisation can vary considerably. In many cases it is limited to the application of a suitable paint scheme and a logo, although some vehicles are given a light support weapon on a pintle or ring mount and may gain some armour. They are still considered 'softskinned' even if they do, as these vehicles cannot resist more than a few hits from small arms and will be completely destroyed by a proper anti-vehicle weapon.



GRAV CAR



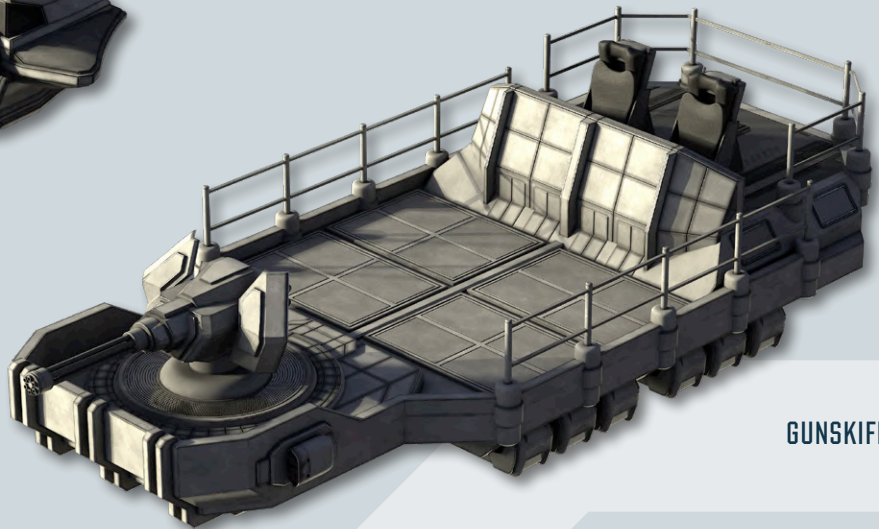
GRAV TRUCK



MILITARISED AIR/RAFT



GRAV BIKE



GUNSKIFF

LIGHT GRAV VEHICLES

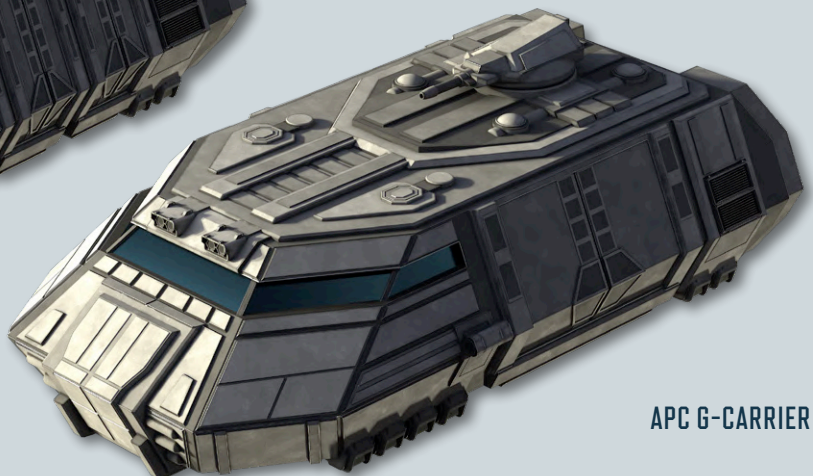
Light grav vehicles represent a category between softskins and armoured vehicles. Some have virtually no protection but are small and nimble enough to survive – hopefully – contact with the enemy. Grav bikes are used by some forces for reconnaissance and even light strike missions, although they are horribly vulnerable. Gunskiffs are more common. These are essentially modified air/rafts which can carry a support weapon, acting as a mobile fire support platform. They differ in designation from militarised air/rafts as they are first and foremost weapon platforms rather than transport.

G-CARRIERS

G-Carriers are, for the most part, lightly armoured transport vehicles. Some are better protected than others and fitted with a significant weapon system. In this configuration they can be used as grav tanks – of a sort. G-carriers in this role are more commonly associated with mercenaries, paramilitary organisations and cash-strapped planetary governments as they would be torn to pieces by real tanks. The major militaries use G-carriers as protected logistics vehicles and sometimes as the basis for support assets such as electronic warfare units. These can go places a grav truck could not but are not considered to be combat vehicles. Another use for G-Carriers is as relatively low-cost security assets used by occupation and counter-insurgency forces.



LOGISTICS G-CARRIER



APC G-CARRIER

GRAV SLEDS

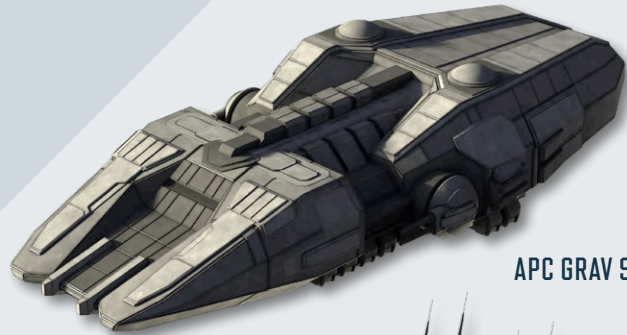
The major belligerents keep costs down by basing multiple vehicles on a common chassis. In many cases the members of this family are all but identical other than their specialist equipment, although some variants require a modified building process. The generic term for these vehicles is grav sled, referring to a general design of chassis and power plant. Some specific vehicles are derived from the original sled design while others are modifications of another derivative vehicle.

The Grav APC, or Armoured Personnel Carrier, is one of the most common grav sled derivatives. Most consist of a power plant and chassis with a crew/driving compartment at the front and a spacious box area at the rear, accessed by rear and/or side doors. All this is encased in an aerodynamic hull with sufficient armour to defeat most likely threats. A light support weapon or aerospace defence system is usually carried. A variant on the grav APC is the grav Infantry Fighting Vehicle, or IFV, which gives up some space in order to carry a heavier weapon. The terms IFV and APC are often used interchangeably for vehicles carrying a VRF Gauss weapon or something heavier.

APC designs are easy to convert into specialist vehicles such as field ambulances, command vehicles, electronic warfare platforms or heavy logistics vehicles. Those that go back to the original sled and have a significantly different structure include aerospace defence and artillery platforms, armoured recovery vehicles and engineering sleds.

GRAV COMBAT VEHICLES

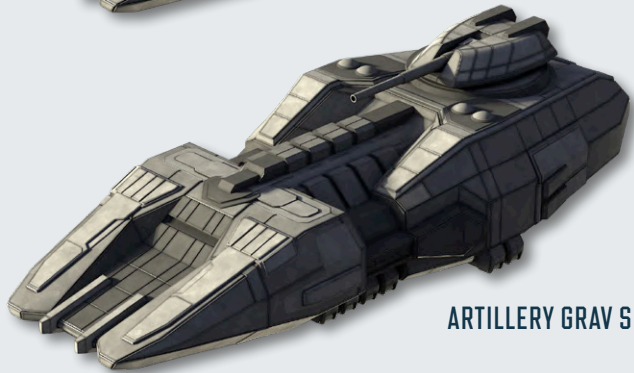
Grav combat vehicles obviously include direct-combat assets such as tanks, gunships and speeders, typically with subdivisions within each class. Light grav tanks are useful for infantry support, screening and reconnaissance while main battle tanks specialise in destroying anything in their path. Gunships are relatively 'low and slow' fire support platforms while speeders perform more like aircraft. Some militaries also field tank destroyers, which are intended as a low-cost alternative to tanks. When used correctly these can be effective but if forced to take on the tank role they inevitably suffer heavy losses.



APC GRAV SLED



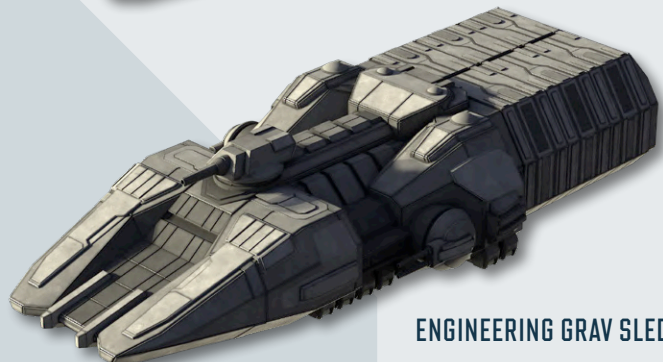
COMMAND GRAV SLED



ARTILLERY GRAV SLED



ARMOURD RECOVERY
GRAV SLED



ENGINEERING GRAV SLED



LIGHT GRAV TANK

LIGHT GRAV TANK

Built on the characteristic rounded-wedge hull, the light grav tank houses its main weapon in a streamlined turret which limits elevation of the main gun. This is offset by the ability to tilt the vehicle or even roll inverted to engage targets in any direction.



MAIN BATTLE TANK

MAIN BATTLE TANK

Similar in design to the light version but mounting a much heavier main weapon, the grav main battle tank has more evenly distributed armour than a ground vehicle as it faces threats from more directions. It still has a main armoured facing which can be pointed towards threats.



GUNSHIP

GRAV GUNSHIP

Based on a grav sled hull, the gunship is heavily armoured but not very aerodynamic. Unusually, it carries multiple weapon mounts. This is counterproductive in tank designs, as multiple smaller weapons are not nearly as effective as a single powerful system, but for infantry support work this gunship can deliver an acceptable amount of firepower in different directions. The flank ('sponson') mounts carry VRF gauss guns, with a light gauss cannon and a co-axial VRF gauss gun on the main dorsal mount.



TANK DESTROYER

GRAV TANK DESTROYER

Built on a relatively lightly protected grav sled, the main gun is carried on an unprotected mount above the hull, known as a gun-over-hull configuration. This allows the weapon to be fired over cover while the vehicle remains hidden. Sometimes described as 'eggshells armed with hammers', tank destroyers are favoured by less wealthy powers as a cost-effective counter to tanks. Their relatively poor survivability is a problem in a protracted conflict.



GRAV SPEEDER

GRAV SPEEDER

Speeders are 'aerospace combat vehicles' rather than 'grav combat' vehicles. They are configured for high speed and operate like aircraft. Many carry a main weapon on a fixed mount through the main hull, with missiles carried externally on stub wings. Hull form is much more like an aircraft than a tank.

FIELD KIT, PLANETARY ARMY OF JEWELL LIFT INFANTRY SOLDIER



Jewell equips its infantry at Tech Level 12, using equipment manufactured locally for the most part, and following standard Imperial Army practice. Lift Infantry personnel are protected by TL12 combat armour (Protection +17, 16kg treated as 4kg when worn) and armed with a TL12 version of the standard Advanced Combat Rifle (3kg). In addition to the in-place ready magazine, the soldier is equipped with six spare 40-round magazines (0.5kg each, for 3kg) and a single hand grenade (0.5kg) which might be a smoke, fragmentation or specialist type. Grenades are mixed within a squad. This load comes to 10.5kg; well within the 'combat light' limit of any soldier fit to take the field.

To the weapons loadout are added important items of field kit. These include an entrenching tool (0.75kg), a bayonet/fighting knife (0.25kg), a personal medical kit (0.5kg), a field maintenance toolkit for combat armour (1kg), a quick-energy food pack (0.5kg), a camouflage/thermal masking/shelter smock/cape (1kg), a powerful flashlight/beacon (0.5kg) and a cord-and-anchors set for climbing (1.5kg). The field kit comes to 6kg, bringing the soldier's basic load to 16.5kg.

To this load will be added ammunition or missiles for a squad or platoon level support weapon, plus a pack containing 'living' supplies and additional ammunition if the soldier is expected to be in the field for more than a few hours. Support gunners will have a heavier weapon, while some soldiers will be equipped with a grenade launcher or missile system and a lighter personal weapon for self-defence. By tradition, a soldier in full kit with a pack, capable of remaining fed and sheltered for a few days away from their base or vehicles, is referred to as being in 'marching order' while the combat load is sometimes referred to as 'short order'. Lugging rations and additional ammunition around might reduce immediate combat capability but once troops are tired and hungry their 'living' supplies become essential to continued effectiveness.

MILITARY CAMPAIGNS

A campaign set during the Fifth Frontier War does not have to focus on the conflict itself but if this is desirable there are a few different ways to go about it. Each has its own character.

THE HIGH-LEVEL CAMPAIGN

The Travellers could play as commanders at whatever level the Referee thinks appropriate. They might even be subsector marshals of the Imperium or their Zhodani equivalents, members of the high nobility, corporation owners and similarly powerful individuals. This certainly gives the Travellers agency, although they will be constrained by their duty to the leaders of their society. There is also the problem of information overload. Commanders get constant reports of the situation in all the combat zones within their area of operations. The Referee needs to keep track of all that, as do the Travellers. This can be a bit much.

An alternative is for the Travellers to be associated with these powerful figures. They might be trusted couriers, special envoys or representatives. Given the communication lags resulting from jump travel, the Travellers may have to interpret their superiors' wishes to match a changed situation, quite possibly creating the chance to alter the course of the conflict. They could get into a lot of trouble for making the wrong decision but at times the orders they were sent to deliver will be hilariously out of date and they must improvise.

A campaign of this sort places the Travellers on the periphery of war zones and also in the luxurious corridors of power. They may have to deal with rather petty rivalries and disputes between powerful individuals, differing agendas, corruption and political manoeuvring. For example, a great noble might feel it is in the best interests of the Imperium if a given world falls, discrediting a rival who can be blamed. Should the Travellers go along with this plot, or put the interests of the Imperium first? What if the fall of *that* noble is in the long-term best interests of the Imperium?

A campaign of this kind can be highly varied, providing direct combat for those who crave it without becoming an endless series of firefights. One session the Travellers might be fleeing an attack by Imperial Marines on the headquarters they were supposed to be visiting and the next dining with the assault commander after a successful counterattack.

THE ORPHANED SOLDIERS

Sometimes individuals or small groups get cut off from their units. They are expected to attempt to rejoin but this is not always possible. For example, a detachment fails to reach the rendezvous point for extraction as the world falls and is left behind. They might fight on as guerrillas, perhaps even leading a successful insurgency for the remainder of the conflict. This situation means the Travellers are stuck on one world until the war ends or the situation changes completely but this is not necessarily a bad thing. It is possible the world might be liberated months or years later, by which time the lost soldiers have become popular heroes whose followers are asking the army to discharge them so they can lead the new government. Such a campaign looks in detail at the events on one world and is largely unaffected by the big picture until the battle fronts return to the Travellers' location.

Alternatively the Travellers might seek a way to escape, perhaps obtaining passage aboard a smuggling vessel. In this case they are loose in the cosmos with whatever military equipment they can salvage. Their army expects them to make their way to a base and receive directions back to their unit but they may have other ideas. They do run the risk of being court-martialled for desertion if they do not seem to have made an effort to get back to where they should be, but the chaos of a war zone will provide plenty of excuses for why they went wandering around instead of hurrying back.

One reason this might happen is being co-opted by a local commander desperate for anyone who can hold a rifle. Whilst the Travellers are not in this chain of command and cannot legally be given orders, a needy commander might offer a choice between court-martial for desertion and helping out locally for a while, along with a promise to send messages informing the Travellers' actual commander where they are and what they are doing.

A band of co-opted soldiers might be formed into an odd-job squad by someone with the authority to do so – or who thinks they have. As the war goes on, an increasing number of personnel will end up far from their units. The long-term solution is to direct them all to a central point from where they can be sent to wherever their parent unit is currently deployed, but there is always something that needs doing urgently, so orphaned personnel might find themselves short-stopped more than once before finally getting back to their proper place.

A campaign based around this sort of assignment allows the Travellers to move around more and experience different aspects of the conflict. They are also more likely to find themselves at a point of decision than those who are still under close control. As part of an improvised combat group the Travellers might be assigned covert operations type jobs or be sent into a chaotic situation for lack of anyone better. This allows the Travellers more freedom of action whilst still remaining within the military framework.

THE CONSULTANTS

The Travellers might not be serving soldiers; at least not all of them. There are a great many people associated with the military on both sides who are not actually members of it. The Travellers might be mercenaries or military contractors, or not soldiers at all. A merchant ship crew, journalists, representatives from an arms manufacturer, or even a group of social scientists studying the effects of the conflict are all possible. Serving military personnel might be assigned to such a group to protect them and, ideally, keep them out of trouble.

The benefit of this approach is that it is extremely flexible. Not everyone wants to be a soldier and many Travellers will chafe at having to obey orders. This does not mean there will be no friction if the Travellers ignore what military commanders tell them; it may be that the Travellers become exactly what the military does not want them to be. A senior officer who is pestered by Travellers wanting an interview about the course of the war or who want an update on that big contract they are trying to negotiate might become exasperated and cease cooperating or have the Travellers thrown in the slammer until they learn a little respect.

A band of 'military-adjacent' Travellers might find themselves at a crisis point without much idea of what is going on. The military provides information on a need-to-know basis and it may well consider the Travellers do not really need to know very much. On the other hand, they will have knowledge and access to options not available to the average soldier. A 'consultant' campaign might see the Travellers caught up in a hurried retreat in which nobody has assigned them transport, and later being sent to carry out back-channels diplomacy with an enemy commander.

This kind of campaign is likely to be the best option unless the Travellers really like the military experience. It has the most options and even allows the Travellers to see the conflict from both sides. A band of Travellers

might have members from both sides and the Travellers could well be flexible in their allegiance. There are many opportunities for those willing to play both sides, although threading a path between two enormous military machines will be challenging.

BATTLES AND FIREFIGHTS

Unless the Travellers want to play out every action in detail, the battles of the Fifth Frontier War are likely to be a backdrop to their actions rather than their focus. The Travellers' mission might involve getting a person or piece of information through a battle zone but that does not mean every combat has to be resolved shot by shot. The Referee may have scripted the situation in advance, knowing when the crisis points come and which side eventually wins, or the outcome might be left open and dependent on the Travellers' actions.

The Travellers should not be able to dictate the outcome of every engagement but their actions should be meaningful at some level. If the Referee's plan calls for the collapse of one force and a chaotic retreat the Travellers will not be able to prevent this, but they should be able to determine how the situation affects them and some of the people they meet. The Referee needs to know in advance what the focus of the adventure is to be. Usually, big events will unfold and the Travellers must navigate the situation as best they can but occasionally they will be able to make a big decision.

A handful of Travellers cannot turn the tide of a planetary invasion by force of arms alone. What they can do is be at the point of decision and affect the choices made by those who direct large forces. It may not always be obvious that their actions will make a difference on the grand scale. For example, a young officer is determined to hold out against desperate odds but the Travellers can see the situation is hopeless. If the Travellers do not intervene the officer's force will be overrun and will make no difference to the course of the battle. If the Travellers can convince the officer to retreat and preserve their force, it is available later when the general in command needs to plug a gap in the line. This in turn prevents an enemy breakthrough which might otherwise have tipped the balance of the current battle.

By using a combination of the Travellers' actions and scripted results of their choices, the Referee can place the Travellers at the centre of big events without burdening them with the responsibilities of command. If the Travellers include the general in charge, a lot more information and therefore preparation time is required than if the Travellers see stuff happening and react to it.

Even smaller-scale combats do not need to be played out in detail unless the Travellers want to. Most encounters in a combat situation are fleeting, with a few shots fired at half-seen targets that disappear almost instantly. The vast majority of shots miss, although volume of fire can drive an enemy under cover which can be considered a good outcome – a hostile who is ducking behind a wall is not shooting at you. If the Travellers are willing to roleplay being under fire, as it were, the Referee does not need to resolve every shot taken in their direction.

For example, the Travellers come under fire from some enemy troops 100 or so metres away. If they react as if this was a real threat the situation can be narrated rather than resolved as a skirmish game. Travellers who get under cover, spray some suppressing fire in the general direction of the threat and move away are reacting sensibly so a narrative incident is suitable. On the other hand, if a Traveller chooses to ignore the threat or behaves in a manner the Referee considers unrealistic the incoming fire needs to be resolved as normal.

Often there is no real need to win a particular fight in the sense of defeating all the hostiles. Breaking contact and getting on with whatever the Travellers are trying to do may be far more important. Enemies who are driven off cease to be a threat and an impediment, which is usually good enough. Travellers who insist on eliminating every single hostile may be missing the point – it is the objective that is important, not the number of bodies on the ground.

Overall, a military combat situation is likely to be chaotic and terrifying, with weird lulls and spurts of intensity. It can be hard to tell where fire is coming from, let alone positively identify a target. Most shots are taken quickly, by soldiers popping out of full cover just long enough to point and shoot, or takes the form of full-automatic fire in the direction of a suspected hostile position. Soldiers often do not know if they hit anything and may end up staying under cover for a long time after the enemy has retreated.

Some actions are different, especially if they occur at close quarters. Storming an enemy position or entering a hostile-held structure can result in short-range fights that go rapidly to a decisive result. Full-automatic fire at point-blank range, grenades rolled through doorways and even hand-to-hand combat with bayonets and hand weapons ensure that close combat is highly lethal. Often one side will balk at the prospect, retreating in the face of a determined assault or going to ground rather than pressing the attack.

At the other end of the scale, there may be no apparent threat until the Travellers are fired upon by concealed hostiles. Snipers and support weapon teams in high buildings can engage anyone moving in the open. The traditional way of staying alive in this situation was to resort to what is sometimes called ‘rat war’ – creeping through buildings and smashing holes in walls to pass rather than boldly stomping down ‘sniper alley’. Fast movement using grav transport is an alternative, although even tanks have to be careful about exposing themselves to an ambush.



IF YOU'RE GOING TO DRAW FIRE...

Sometimes the Travellers will need to move or take some other action under fire. It may be possible to narrate the situation, providing the Traveller roleplays the unpleasantness of being shot at, but at times a game mechanic is necessary. Rather than rolling to see if every enemy in range spots the Traveller, whether they shoot and whether they hit, the situation can be abstracted with a 2D check. Modifiers apply to this check, based on the circumstances and what the Traveller is doing. Apply all relevant DMs.

MODIFIERS

The Traveller is unaware of or brazenly ignoring the threat: DM-4

Enemy in close proximity (within 10m): DM-6

The Traveller is not making much effort to avoid drawing fire: DM-2

Enemy in proximity (within 11–25m): DM-3

No enemies within 100m: DM+2

No enemies within 250m: Travellers may not be fired on. If they are, DM+4

Bad visibility (smoke, dust and the like): DM+2

Cluttered environment (partial cover, lots of distracting movement): DM+2

Traveller is well camouflaged or concealed: DM+2

Shooter is under fire (suppressing fire, nearby artillery barrage): DM+4

For example, the Travellers are trying to reach a friendly position through a cluttered environment of smashed buildings and rubble. Visibility is bad due to smoke from nearby fires. These two factors are worth DM+2 each, for a net DM+4. The nearest hostiles are about 30m away, which produces no modifier.

Cautious Chrys, a veteran of the Imperial Army, is moving carefully and makes a point of trying to remain concealed, which applies a further DM+2. A group of enemy soldiers spots him as he dashes past a gap in a ruined wall. The Referee rolls 10 on 2D, modified to 16. The hostiles get a few shots off but none comes anywhere close before they lose track of Chrys in the general chaos of a battle.

Meanwhile Less Cautious Lydia, distracted by trying to use the navigation app on her comm, forgets to stay under cover. Visibility is still bad and the hostiles are confused by all the movement and random firing going on but DM-4 applies as Lydia forgets about her surroundings. The Referee rolls 7, for net DM+0. Perhaps this is what distracted the hostiles from Chrys! Several shots hit the brickwork around Lydia. She quickly gets under cover but the hostiles know roughly where she is and will continue to fire at her next round.

Enemy Fire Effect

2D+DMs	Notes
0-	The Traveller is targeted by an enemy sniper or support weapon and takes damage from a standard weapon of the type.
1–2	The Traveller is targeted by a light support weapon or multiple rifles and takes damage from an autofire burst.
3–4	The Traveller is hit by a stray shot from a typical enemy rifle, suffering normal damage.
5–6	Shots come close but the Traveller is not hit. However, they are marked and will be attacked again next round with DM-2 on this table. Multiple results of 5–6 produce stacking DMs and these DMs persist until the Traveller is no longer targeted.
7–8	Shots come close but the Traveller is not hit. They will be targeted again next round.
9–10	Enemy fire is entirely ineffective but the Traveller is still targeted.
11–12	Enemy fire is ineffective and the shooter loses sight of the Traveller. They are no longer targeted.
13+	The shooter became distracted, got hit or is otherwise incapable of targeting the Traveller. They or someone else might still reacquire the Traveller next round but DM+2 applies on subsequent checks until the enemy achieves a result of 8- on this table.

THE FIFTH FRONTIER WAR

The Fifth Frontier War pits the Zhodani Consulate and its allies, often referred to as the Outworld Coalition, against the Third Imperium and its main ally in the region, the Darrian Confederation. A variety of independent, insurgent, pirate and mercenary forces are also involved in the conflict on both sides. It is reasonable to say that the Sword Worlds Confederation, allied to the Zhodani, is an enthusiastic participant with plans to make big gains whilst the Darrians have a much more defensive posture.

The Zhodani are on the offensive at the beginning of the war and intend to remain so, which means they need to capture and secure planets. They are well aware that the war is likely to end in a treaty rather than total victory, and the side in possession of the most significant worlds and systems will have the upper hand at the negotiating table. Other worlds may have to be taken for strategic reasons, such as a desire to retain them as bases or impediments to Imperial activity in the region after the war. If these conditions do not apply it may suffice to control the system without landing troops.

For its part the Imperium is very much on the back foot in the early stages of the war and will be fighting defensively to hold as many planets as it can. Later, counter-offensives will be necessary in order to retake lost worlds or even to capture Zhodani territory. If it appears that the war is coming to an end, perhaps due to pressure from the nobility or a crisis elsewhere, the Imperial Army may be called upon to make reckless attempts to snatch back critical worlds. If circumstances allow, however, any offensives will be carefully prepared.

OPPOSING DOCTRINES

Doctrine can be described as the overall aim of the state, which in turn dictates the preference for certain weapon and unit types. Tactics and strategy can be revised on the fly but doctrine takes years or even decades to alter. It will dictate the way forces train and the way commanders think. A clash between differing doctrines can result in both sides essentially fighting different wars. For example, an industrialised power might use armoured forces with heavy air support

to overrun and capture the enemy's cities, whilst their relatively undeveloped opponent is using small units of infantry to infiltrate and harass their enemies without focusing on population centres. This is known as an asymmetric conflict.

Other than in deliberately even games such as chess there will always be asymmetry in conflict. Indeed, creating local asymmetry is the goal of all competent commanders – nobody wants a fair fight! Even if units and numbers are exactly equal, which is rather unlikely, a good commander uses part of their force to stall or contain a larger part of the enemy whilst they defeat the rest. However, an asymmetric conflict in the true sense pits very different forces against one another.

Advanced and industrialised powers will typically field combined-arms forces comprising infantry, artillery, armoured combat vehicles and aerospace support, along with the necessary command and control, logistics and combat engineering capabilities to keep these units effective. An asymmetric opponent might not have access to these lavish weapons and have to rely on bands of fighters moving around in civilian vehicles. On the face of it, these ill-equipped gunmen should be almost immediately blasted into oblivion. This often happens, especially when they try to morph into a conventional all-arms fighting force or begin to operate as one. If, instead, the apparently weaker force plays to its strengths rather than those of the enemy, it might actually win.

The difficulty for conventional forces lies in bringing their enemies to action. If their bases can be located and their sources of supply cut off they will become ineffective or be forced into more open action where the conventional force's superiority will tell. An asymmetric conflict can be compared to a knight in armour with a sword fighting a swarm of bees. The sword represents devastating overkill on anything it strikes but so long as there are enough bees they cannot be defeated by it. History is replete with incidences where a conventional army has occupied government centres and more or less pacified cities, only to find itself drawn into a years-long quagmire. The cost and steady dribble of casualties will eventually cause the force's political masters to decide it is not worth the cost.

Conflicts of this sort are likely on many worlds during the Fifth Frontier War. For the Imperials, the most serious asymmetric threat is the Ine Givar movement, which straddles the lines between terrorism and insurgency, and also between insurgency and conventional conflict. Imperial worlds captured by the advancing Zhodani will also see insurgencies as well as protracted small-scale resistance even after formal units have been destroyed. Although they are nuisances rather than a major threat, these conflicts sap the strength of the major powers and can influence events elsewhere.

There is a difference between insurgency and terrorism, although those involved will tend to use the label they prefer. Terrorism is defined as the use of fear for a political or ideological end and is characterised by deliberate attacks on civilians. It is always possible for a 'clean' insurgency to cross this line accidentally, or for some members to decide they want to go further, but a guerrilla or insurgent force that restricts itself to only military or militarily significant targets is not engaging in terrorism. The line is a fine but clear one. Blowing up a bridge to impede the flow of supplies across it, and trying to avoid collateral damage in the process, is a legitimate military action. Destroying the structure in order to cause mass civilian casualties among those using it is terrorism.

The distinction may or may not matter to people trying to rid their world of invaders but it can have long-term consequences. If the world is not liberated, the occupiers will come down hard on terrorists and may not trouble themselves to sort out the legitimate resistance fighters from the criminals. On the other hand, if the world is freed the liberators may have to decide between putting terrorists who see themselves as loyalist heroes on trial or quietly turning a blind eye to atrocities.

Both sides, but the Consulate in particular, will try to weaken their opponents by supporting and sponsoring asymmetric conflict. The primary tool for the Zhodani is the Ine Givar movement, although it is not aligned with the Outworld Coalition and might become an additional enemy on some worlds. Imperial worlds that have not been fully pacified might also see insurgencies and stirring them up will form part of Imperial doctrine. However, these are peripheral activities. The major powers will fight the critical battles with highly organised forces optimised for warfare in a complex three-dimensional battlespace, which is heavily influenced by the 'fourth dimension' of non-physical warfare. Traditionally this has meant use of the electromagnetic spectrum for intelligence and guidance purposes but also includes cyber and psionic warfare.



GRAND STRATEGY, STRATEGY AND TACTICS

It is widely accepted that 'grand strategy is what you are trying to achieve, strategy is how you go about it, and tactics is what you do in the face of the enemy'. Grand strategy is concerned with overall war aims and the key events that will achieve them. This can exist on different levels. For example, securing the starport on a major world is one of the keys to capturing the world and capturing that world is a critical component of the overall war aims.

Once a grand strategy has been formulated, the focus becomes closer and more detailed. Forces are assigned their objectives in support of the starport capture operation. One formation is designated to eliminate an aerospace defence complex while another advances on the port itself. Once the skies are clear an elite unit makes a meteoric assault, dropping directly onto the port from orbit. This force cannot survive indefinitely but will cause sufficient disruption that the ground units can break through to relieve it and take possession of the port.

This is all part of the overall strategy to take the world. Other forces are attacking enemy bases and centres of government. Some of these actions are intended as diversions, drawing enemy attention and resources away from the critical point. Others are necessary to complete the overall objectives. Taking the port itself allows reinforcements and supplies to be brought in en masse, enabling the ground forces to operate more effectively.

What actually happens in the fighting is determined by tactics. Multiple units need artillery and aerospace support but there is a limited amount available. A unit has hit unexpectedly tough resistance; should it be reinforced or pulled back? The meteoric assault force is repelled – should it try to fight its way out of the landing zone or cling to whatever positions it can occupy in the hope of relief? No strategy survives intact in the face of the enemy but good tactics will permit the force to find a way to win.

The basic principles of strategy and tactics do not change all that much as technology develops, although some new options become available. Strategically speaking, the key is to capture objectives or obtain results that will damage the enemy the most. Taking out a command and control centre is vastly more damaging than eliminating the same number of ordinary soldiers.

Pushing the enemy off their supply line – for example, away from the port they were bringing in supplies through – will reduce their combat capability far more than inflicting casualties.

The same applies at a tactical level. Frontal assault is an expensive and wasteful way to defeat an enemy force, although if sufficient superiority exists it may be a viable option. A force of grav tanks may well be able to overrun the enemy without taking excessive damage, particularly if there is a technological differential. More commonly it is necessary to flank the enemy or suppress their defences with artillery. Often the enemy can be forced to withdraw when a position is made unviable, advancing the strategic aims of friendly forces without necessarily inflicting large numbers of casualties on the enemy. Casualties are, unfortunately, often seen as an indicator of victory, which can lead to an obsession with attrition rather than more effective war aims.

At first glance it is apparent that a viable grand strategy revolves around the control of major worlds and whatever other star systems are necessary to keep them. However, the situation is more complex. If the Zhodani Consulate expects to win a decisive victory it will seek to establish solid control over a wide swath of formerly Imperial space and to leave the industry on worlds it captures intact as far as possible. This enables the conquered worlds to become economic assets as soon as possible and retains their value as bargaining points.

If it becomes apparent that gains will be lost again, it is likely the aim will change. Industrial capacity may be destroyed, rendering the world economically worthless and even a drain on resources if it is to be rebuilt. Some machinery may be removed and relocated, especially TL15 items that can be studied. Rather than trying to hold a region in order to annex it or make it neutral, the Consulate will instead concentrate its forces to retain worlds that will be directly useful after the war, for example as forward bases and those that can be traded for concessions.

Imperial grand strategy, in the early months of the war at least, must focus on not losing. It may be necessary to abandon some worlds in order to have sufficient forces available elsewhere, although this may have political ramifications. Certain elements within the Imperial political structure may push for a 'not one step back' grand strategy which may make Zhodani conquests expensive but could deplete the Imperial Army to the point where it cannot stop the overall

advance. Early on, the most effective grand strategy will be to slow the Zhodani advance, buying time for the vast resources of the Imperium to be brought to bear. This will require some tough decisions about whether to support holdout worlds or to abandon them. Once – if – the tide turns the Imperial Army will begin retaking lost ground and may end up pursuing a similar grand strategy to the Zhodani.

The Darrian Confederation is at present maintaining a very defensive stance, whilst the Sword Worlds clearly intends to capture territory. The acquisition of industrialised worlds such as Lanth and Vilis would increase its power, whilst other systems could be developed or secured as a buffer against the Imperium. It remains to be seen whether the Sword Worlds will make a major offensive against the Darrian Confederation. Historical animosity suggests this may occur but the long-term strategic position of the Sword Worlds may be better served by gains elsewhere.

ATTRITION

Without a suitable grand strategy in place, conflict is all but pointless and liable to become at best an exercise in attrition. It is possible to grind down an enemy to the point where they choose to negotiate but this is an inefficient and costly way of waging war. A state that focuses on casualty counts or tonnage of ships destroyed may come to the table thinking it has won, only to find that the other side has attained more meaningful objectives.

Enemy forces do not necessarily have to be destroyed. It is sometimes better to bypass, isolate or otherwise nullify enemy formations. Rendering an enemy incapable of influencing events around it is every bit as useful as destroying it. Those that forget this tend to be drawn into pointless battles or – worse – end up throwing away even more troops in order to ‘make the casualties we already took mean something’.

Attrition, in and of itself, is not a strategy. Indeed, it has been described as the absence of strategy. It can be a useful tool, however. The loss of a prestigious or important combat force can have a devastating effect on morale, and creating a ‘meatgrinder’ can draw in enemy reinforcements which can then be ambushed. If an enemy force must be eliminated this is best done by striking hard at a key point and causing a collapse rather than grinding away against the enemy’s strength.

One example of this is the ‘cauldron’ or ‘kessel’ battle, where the enemy is trapped in a place from which it cannot escape, then battered into submission by artillery and aerospace attack or is cut off from supplies until it becomes ineffective. A well-executed kessel operation can force the surrender or even annihilate a major enemy force. Rather than bashing away all along the front, mobile forces seize key objectives and cause the collapse of the enemy, perhaps a high ridge from which aerospace weapons can shoot down any grav vehicles the enemy is using, or a river crossing that wheeled and tracked vehicles need to use.

Both strategy and tactics need to focus on making the enemy less effective rather than causing losses. These do overlap at times. For example, an enemy formation that is forced to relocate from an unviable position might then suffer additional losses when attacked whilst on the move. Often a small force is all that is required to harass a retreating enemy, maintaining pressure and nibbling away at the enemy’s strength as other units move on to a different target. Alternatively, highly mobile formations can dash into a blocking position and trap an enemy force which is being pursued. Any opportunity to reduce the enemy’s fighting power is useful but overall the focus should be on furthering the aim of the operation rather than inflicting casualties for the sake of it.

NETWORK-CENTRIC WARFARE

By the upper-mid Tech Levels, military equipment becomes capable of functioning as a network, and at the levels of technology fielded by the major combatants there is enormous integration. Cameras on vehicles, on the armour of individual soldiers, on drones and on satellites all combine to create an integrated picture of the situation. Used well, this information can prove deadly. An enemy position might be concealed from the soldier shooting at it, but information sharing means that they can effectively see through walls. High-tech troops will be alert to this but militia or mid-tech soldiers might think they are completely safe until bullets start coming through their concealment.

Data integration is a two-edged sword, however. Poorly trained or nervous troops can be overwhelmed by information overload or be caught fiddling with the filter settings on their battle management system when simply looking around would have detected the threat. The network also provides multiple entry points for false data; spoofing sensors or engaging in cyber warfare can nullify the information advantage or even deceive the users.



Over-reliance on technological assistance is as detrimental as lacking it altogether, especially in an environment where coverage can be disrupted or distorted. Advanced forces incorporate counter-electronic warfare systems at all levels. These include jammer drones, small electromagnetic pulse generators and similar 'noise' producers as well as sophisticated cyber-warfare equipment. Relatively low-tech solutions include showing the sensors what they need to create a false impression of the situation, such as thermal image generators which can cause the battle management system to think there is a tank in the area, or that an armoured vehicle is in fact a civilian one. False communications signals or fake sensor emissions can cause general confusion or be tuned to a specific set of outputs.

If one set of sensors is fooled into interpreting false emissions as a real threat, this can be echoed through the battle management system. Skilled troops pay careful attention to the level of confidence their system

has in any given piece of information but in the stress of battle it is common to see any hint that there is a tank present as meaning there really is one. A common and effective gambit is to use disposable emitters to mimic the emissions of anti-armour or anti-aerospace missile guidance systems, creating the impression that a given area is highly dangerous for vehicles where in fact there are few or no weapons capable of engaging them.

False positives of this sort are rapidly eroded by new data but even this can be turned to the advantage of a devious opponent. Decoys can be used to create the impression of tracking and targeting devices then powered down. Initially this will show up as a concentration of guided weapons but after the decoys are turned off the confidence level will drop to almost nothing. This is likely to be interpreted as a false positive, when in fact there are powered-down weapons hidden in the area. When the enemy advances, confident of a bluff, they will suddenly be lit up by multiple launchers and engaged in a massed sucker punch.

MANOEUVRE STRATEGY VS ATTRITIONAL WARFARE

ATTRITIONAL WARFARE

In this hypothetical engagement, both sides are fielding roughly equivalent lift infantry brigades, each with their own artillery and armoured reconnaissance formations in support. One side has amassed twice the force the other has in the region, creating an apparently sufficient superiority. This is no mindless head-on assault against prepared forces; the attacking commander has enough sense to concentrate half his force against one flank for the enemy while the other half attacks along a broader front.

1st Lift Infantry Brigade (1a) advances in a column formation, led by its armoured recon unit. The brigade artillery (1b) remains back in support, concentrating its fire on the single lift infantry battalion to the brigade's front. At the outset of the action 1st Brigade has a three to one superiority in infantry, which is generally considered sufficient for a successful attack if properly supported.

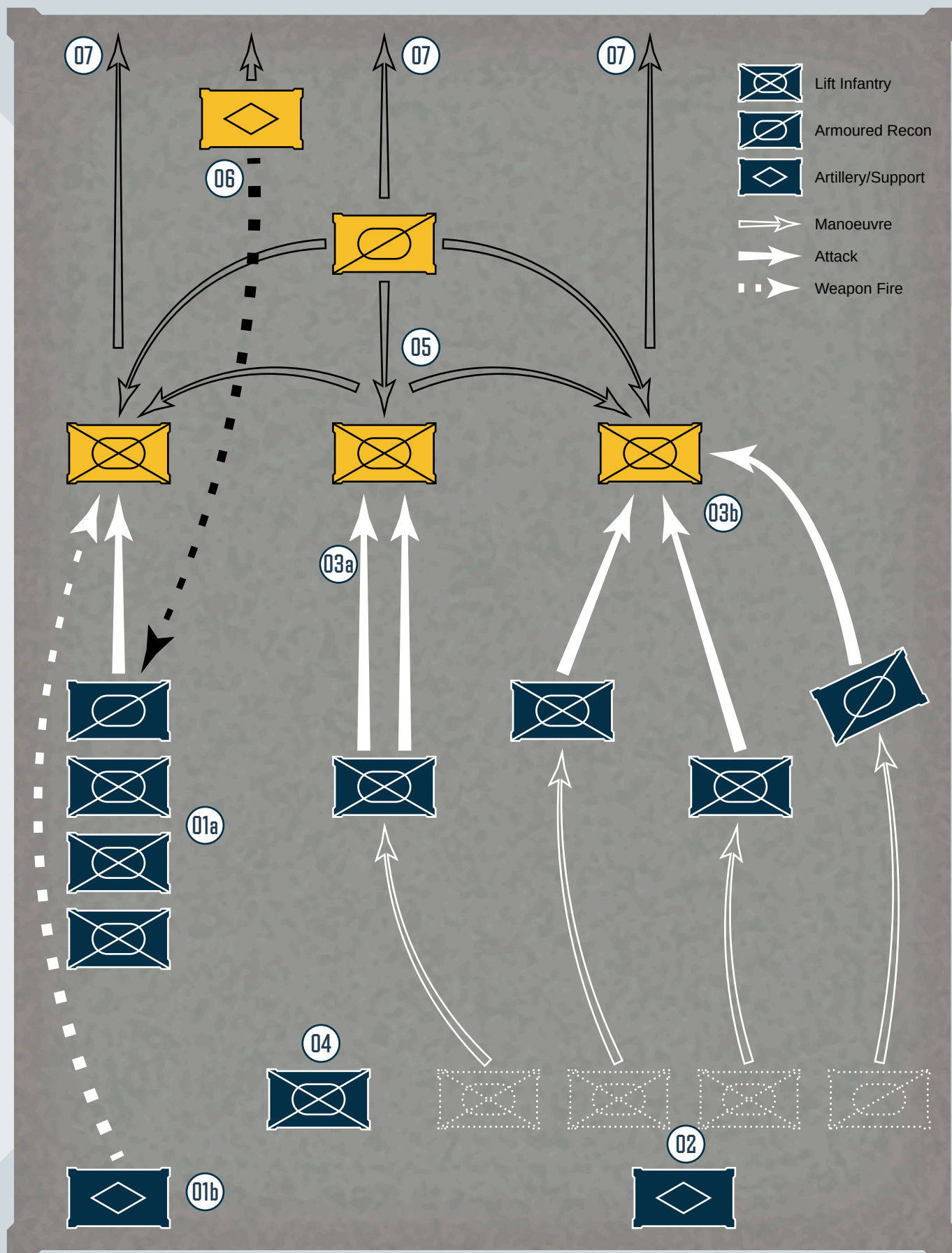
2nd Lift Infantry brigade (2) advances with its three lift infantry battalions in in-line formation and its armoured recon battalion on the flank. The central enemy lift infantry battalion is presented with a 'holding' attack (3a) by an equivalent force, sufficient to prevent it going to the aid of its fellows. If pressed too closely this attack will fail with heavy casualties but as a holding tactic it is viable.

The armoured recon unit attempts to flank the enemy lift infantry battalion while the two lift infantry battalions on that flank pressure its front (3b). A single lift infantry battalion, not attached to either brigade, is held in reserve to counter setbacks or follow up a victory (4).

The enemy commander breaks up their armoured reconnaissance formation and uses it to reinforce the lift infantry, quickly redirecting the elements sent to the centre when it becomes apparent that unit can hold its positions (5). All artillery fire is directed at the main enemy thrust coming on the right flank (6). Despite this, the battle is a foregone conclusion. The left flank might hold, and the centre more than likely will, but the right is too heavily outnumbered. The force begins an orderly retreat (7), with its armoured recon unit fighting a desperate rearguard action.

This battle was won by decisions made before it began. Superior concentration of force permitted an unimaginative frontal attack to succeed. While some tactical sense was displayed by concentrating against one flank, the plan relied on brute force and results in significant casualties. The enemy brigade was able to retreat and, whilst battered, remains combat-worthy. The enemy will be ground down over time, especially if they are outnumbered at many points, and a local victory can be claimed. Objectives may have been seized but this was not an effective use of a highly mobile force.





MANOEUVRE WARFARE

The same aggressor force is faced with a lift infantry brigade (1) supported by a command post (2) protected by a lift infantry battalion (2a) and an aerospace defence battalion (2b). The attacking commander demonstrates a threat with one of their lift infantry brigades (3), whose armoured reconnaissance element (3b) spots for the combined fire of both brigades' artillery element (3c) and (4c). Casualties will be higher on the defending side but this force can hold out almost indefinitely against the brigade in front of it.

Meanwhile, elements of the second attacking brigade (4) sweep wide around the flank of the defenders. An armoured recon battalion (4a) and a lift infantry battalion strike the enemy command post, hoping to overrun it with speed and firepower. This has the effect of depriving the enemy both of command functions and aerospace defence, which may have longer-term effects even if the overall attack is not successful. These elements are intended to drive off the enemy at the command post and capture it, then to hook into the rear of the main force.

Two other lift infantry battalions (4b) hook into the rear of the enemy brigade, causing confusion, while the independent battalion (5) provides flank security for the manoeuvre before making its own advance. With hostiles to front and rear and the command post off the air, the defending brigade (1) is in a perilous position. Any retreat will have to be a breakout rather than a rearguard action, whilst standing its ground will result in annihilation.

The attacking commander still benefited from superior force density but used it more imaginatively, disrupting command and control and placing the enemy in a position whereby retreat was necessary but difficult. Ideally the enemy would be stunned or rendered less effective by the loss of command functions, then could be overwhelmed if its commander failed to take decisive action. A forward counterattack is out of the question; only retreat offers any chance of escape and that door is already closing.



02



02b

02a



04a



04b



05



04



04c



01



03b



03



03c



-  Lift Infantry
-  Armoured Recon
-  Artillery/Support
-  Aerospace Defence
-  Command Post
-  Manoeuvre
-  Attack
-  Artillery Fire

The information network is immensely powerful but must be properly handled, otherwise it becomes confusing, distracting, or a tool for enemy deception. For all the cameras, emissions detectors and other sensors on the battlefield, there is still no substitute for soldiers having 'eyes on' the target. Anything else may be an electronic ghost or false assumption.

THE NOISY FOURTH DIMENSION

Warfare takes place in what is often referred to as a complex four-dimensional battlespace. The first three dimensions are the usual up/down, left/right, forward/back. With grav mobility, it is possible to move in any of these directions at will, although enemy fire will dictate what is wise and what is not. The fourth dimension is the electromagnetic spectrum, which increasingly influences the rest of the battlespace as Tech Level rises. All these devices, and attempts to disrupt them, creates a great deal of electromagnetic noise.

There are two broad categories of electromagnetic system. Optical systems such as lasers and closely-related infrared-frequency devices form one group, whilst those that use radio frequencies the other. The optical group is used for detection, tracking, rangefinding, target designation and the like as well as information transmission in some cases. Laser communicators are extremely hard to intercept but this can be a two-edged sword. The recipient has to be in exactly the right place to receive a signal.

Lasers are the least sensitive electromagnetic systems to 'noise' in the fourth dimension but they are blocked by any solid object or opaque gas along their line of sight, and can be disrupted or perhaps distorted by temperature and humidity. Lasers create little electromagnetic noise, meaning they are hard to detect and cannot be jammed using electromagnetic systems. Laser designation is employed from upper-mid Tech Levels onwards, with weapons homing in on the reflection of coded pulses from a designator. At the Tech Levels of the main combatant powers it is rare for a soldier's primary weapon not to have a designator built in, enabling any soldier to guide precision weapons or point out an objective. Laser detection equipment is standard on most combat vehicles in the Fifth Frontier War, enabling the vehicle to take cover or employ countermeasures such as anti-laser aerosol dispensers to break the targeting lock.

Thermal systems can be used to detect targets which are difficult to discern using optical frequencies, or to guide weapons. The latter works best when the target is very much hotter than its surroundings, such as an engine or the barrel of a tank's fusion gun. Thermal systems can be reduced in effectiveness by concealing heat sources or using a heat exchanger to move excess energy into a heat sink. In some cases heat sinks can be ejected as a decoy. However, more advanced thermal systems can be set to home in on a specific temperature range rather than just chasing the hottest object in sight.

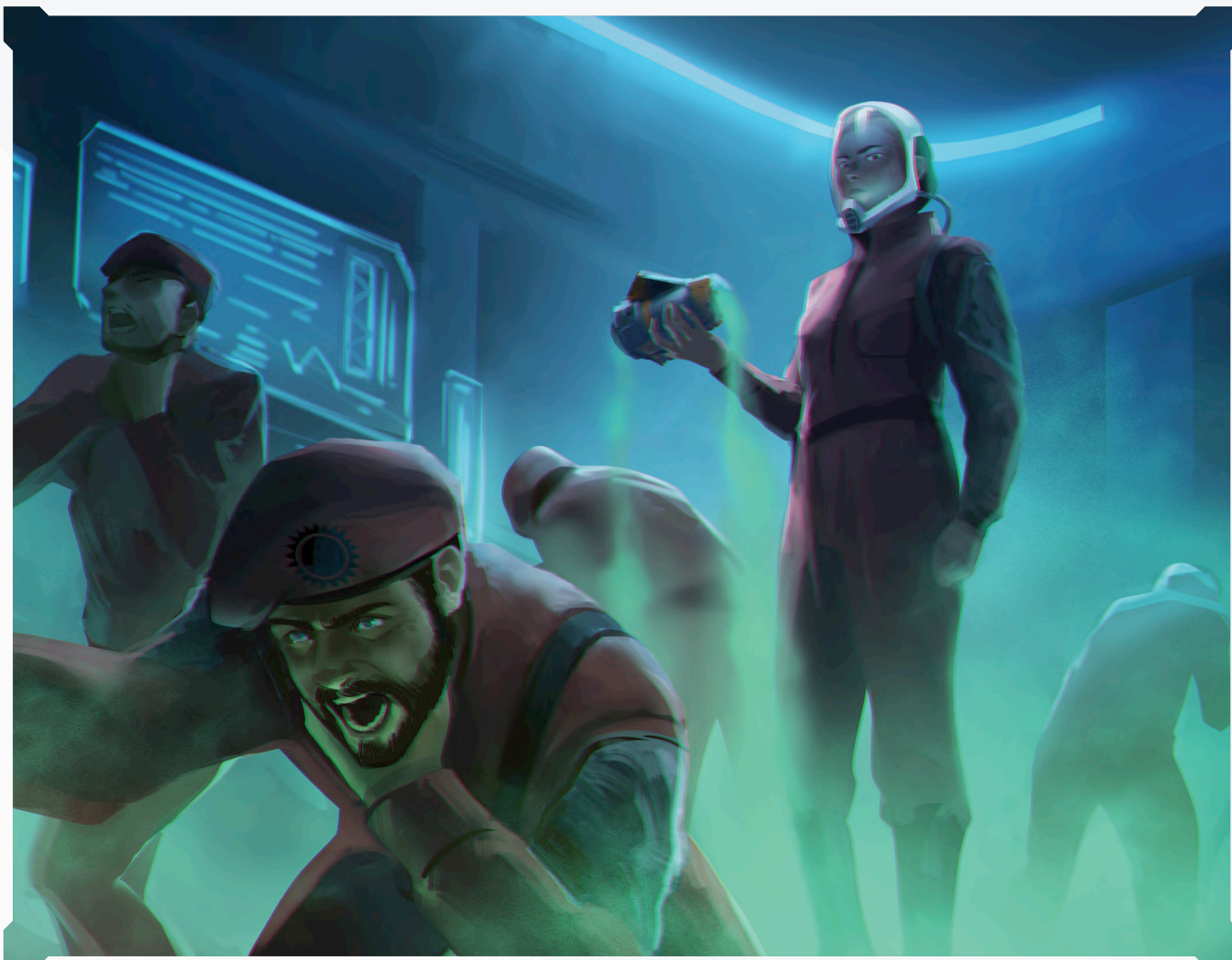
Thermal systems can also be fooled by low-tech measures. Personnel protected by combat armour can hide by setting fire to their surroundings, although this can be hazardous. A battlefield with multiple hotspots can create clutter which confuses thermal sensors looking across it. Plumes of hot air above fires or explosions can conceal vehicles and can create false positives – albeit usually fleeting ones – on target recognition systems.

NUCLEAR AND BIOCHEMICAL WARFARE

All combatants in the Fifth Frontier War have agreed to treaties restricting the use of certain weapons and attacks on certain targets. Chemical agents, other than those created as a byproduct of a permitted weapon, are outlawed. This means that tear gas and the like cannot be used for military purposes but is permitted when dealing with a civil disturbance. There is a fine line between occupying troops using gas to disperse a riot and deploying it against insurgents, but in the grand scheme of things a transgression is unlikely to lead to escalation.

Similarly, the smoke from an obscurant might be somewhat toxic but is not considered a chemical attack as any harm is a byproduct of the weapon's primary function. This exception is used elsewhere, notably in regard to particle accelerators and fusion guns. Were one side to push the limits too far, the other might decide to retaliate in kind, which would make the conflict more horrific without creating any real advantage.

Biological agents are also banned and are less likely than chemical weapons to be used other than under the most dire of circumstances. Biological agents in this context are defined as living organisms that directly or indirectly cause harm, although the use of animals is specifically excepted from this prohibition. That is to



say, loosing savage dogs against the enemy would be a legitimate, if rather strange, gambit but infecting enemy soldiers with a disease would not. Most biological agents take the form of infectious diseases but parasites or creatures that, while themselves harmless, produce toxic substances by way of their life processes cannot be used as weapons.

The situation is more complex regarding radiation. Nuclear munitions are an accepted part of warfare and their harmful radiation effects are considered a byproduct of their direct effects so are legal. The same applies to fusion and plasma weapons. Even particle and meson weapons are considered destructive weapons first and radiation devices second, and so are lawful for use against military targets. Weapons such as an enhanced radiation device (neutron bomb) are not permitted as their primary function is to create harmful radiation. There are also restrictions on using radiation-producing weapons near a noncombatant population.

As with all agreements, compliance is not guaranteed. Forces associated with one side or the other, such as pirates and organisations like the Ine Givar movement, might ignore their allies' treaty stipulations. It is also possible that these groups might be used as a cover for the use of banned weapons by one of the major belligerent powers. Rogue commanders, or a force in a desperate situation, might also decide that the ends justify the means.

Since the belligerent powers are already at war, the threat of force is not much of a deterrent. However, escalation is generally seen as a bad thing by both sides. This view is more or less universal among Zhodani commanders whereas some Imperials actively promote the use of weapons of mass destruction. This may be due to the fact the Imperium is on the defensive but in some cases the rhetoric is driven by hate or a desire to play to the emotions of those who hate the

Zhodani. Vilani traditionalists within the Imperium are also little concerned about the implications of using weapons of mass destruction as they have always played a part in Vilani warfare.

The combat armour used by both sides protects against radiation, radioactive fallout, chemical and biological weapons providing troops decontaminate before unsealing their armour. Decontamination systems are a standard part of a battalion's support equipment. In addition, nuclear dampers make nuclear weapons far less effective. This is another part of the reluctance of both sides to use weapons of mass destruction – they are likely to result in retaliation in kind and are limited in effect even if they are used. Civilian populations, on the other hand, are highly vulnerable. Atrocities are likely to be counterproductive in the long run, although if the situation becomes truly desperate one side or the other may decide to escalate.

PSIONICS

The use of psionic powers by those with access to them is inevitable but unlikely to have much impact on a grand scale. The vast majority of Zhodani military personnel are Proles, who by definition have no psionic abilities. Intendents and Nobles might have a useful power but they are very much in the minority. A unit might benefit from clairvoyant reconnaissance, and of course much has been made of the teleporting commandos fielded by the Consulate, but the most potent use of psionics is in intelligence work.

A telepathic observer can pick out the subject's thoughts and be sure they are genuine in a way that no other form of interrogation can approach. This does not mean the telepath cannot be deceived by someone who has been let to genuinely believe misinformation or who has had very good anti-telepath training. The Imperial Army includes this in its resistance-to-interrogation training for officers and senior non-commissioned officers who might have access to sensitive information. Ordinary soldiers are unlikely to know much of use and in any case training so many people would be impractical.

Anti-psionic technologies are also in use. The most common is a psionic shield helmet, with larger versions of the same device used to protect sensitive areas from clairvoyance or telepathic eavesdropping. Some units are specially trained in anti-psionic warfare

RADIATION AND FALLOUT

Ionising radiation causes damage to the cells of living things, which can cause long-term health problems even if it does not kill the victim. However, death is not instantaneous. This makes radiation a weapon of questionable effectiveness. Enemy troops might choose a suicide attack over a lingering, agonising death, thereby inflicting casualties that would not otherwise have been taken. Attempts to negotiate and maintain a lasting peace after a conflict are also hampered by large numbers of survivors whose health slowly declines.

The radiation emitted by a nuclear explosion or fusion gun discharge is short-lived but can irradiate nearby materials, which then slowly release harmful radiation making the region uninhabitable. Radioactive fallout is worse, in that it can be spread widely. Fallout is irradiated dust thrown up by an explosion or otherwise moved from the radiation-event location. It can be washed off a suit easily enough but if ingested or inhaled it will cause damage internally. This is far more likely to kill the victim in the short or long term than externally encountered radiation.

and make use of devices such as telepathic decoys or 'screamers' which act like area jammers for telepathic powers. A corps of Imperial psions is also available, although their numbers are much lower than those of their Zhodani opponents.

Psionics will not decide the outcome of the war unless a senior commander or great Imperial noble can be influenced to make decisions benefiting the Consulate. However, at the local level powers will be applied creatively and effectively. For example, a particularly effective Imperial sniper might be countered by infiltrating telepathic snoopers into their area of operations, defeating conventional concealment skills. Infiltration units will be more effective if they include someone who can scan the area ahead and avoid patrols or find valuable targets. These are low-level actions built into the way the Zhodani military operates.

MILITARY ORGANISATION

Organisation may be the single most important factor in military effectiveness. Even just a handful of civilians turned freedom fighters will develop a level of organisation if they survive their first encounters with the enemy. Ad-hoc teamwork will enable this force to defeat a similarly disorganised group that fights as individuals and lessons learned will lead to established practices. A group that has learned to trust the support gunner to cover them as they advance is becoming organised, as is one that forms teams within the unit based on mutual support or elimination of weaknesses.

As a force grows in size this becomes ever more important. Communications protocols enable rapid and effective requests for support and movement of information. Organised sub-units allow a commander to know what level of fighting power is represented by any given group and what its primary strengths and weaknesses will be. Integrated training fosters cooperation between different types of troops and builds confidence among personnel. A unit ordered to advance under fire is far more likely to obey the order if they know there are competent support gunners and artillery units ready to support them.

The factions involved in the Fifth Frontier War take differing approaches to military organisation and may have a different doctrine, but the crucible of war tends to push military organisation into a similar format

which is dictated by the ability of the commanders to maintain control. Having more troops looks like an advantage but if the operation dissolves into chaos they are wasted and those extra soldiers are not available somewhere else. Sometimes a greater number of smaller units is better than a vast horde riding the railroad of diminishing returns.

The Darrians and the Imperium use a generally similar system of organisation, whilst the Zhodani and the Sword Worlds do things a little differently. However, the pressures and necessities of handling an army tend to result in units of a broadly similar size. Imperial designations are presented here, along with their associated leader rank in the Imperial Army. Other systems can be compared and contrasted.

As forces become larger they tend to have a greater number of supporting units attached. For example a lift infantry division might have two or three lift infantry brigades plus a suitable amount of artillery, aerospace defence and armoured units as well as 'tail' formations such as logistics, communications and medical units. Handling large formations becomes more complex due to these factors as well as the sheer number of people involved.

Unit Sizes

Force	Leader/Commander	Notes
Squad	Squad Leader	A small group of infantry, typically 3–6 in number.
Section	Corporal or Sergeant	Typically 2–3 squads, numbering around 6–12 personnel.
Platoon	Lieutenant	Multiple squads or sections, numbering around 25–40 personnel, or a small group of vehicles or artillery pieces.
Company	Captain or Major	Multiple platoons, typically numbering 100–200 personnel or several vehicle or artillery platoon-equivalents.
Battalion	Lieutenant-Colonel	Multiple companies, typically numbering 400–800 personnel or equivalent.
Brigade	Brigadier General	Typically two or more battalions plus attached units.
Division	Major-General	Typically two or more brigades plus supports.
Corps	Lieutenant-General	Typically two or more divisions plus supporting units.
Army	General	Multiple corps plus attached forces.
Army Group	Field Marshal	Multiple armies.

TEETH AND TAIL

Military forces are composed of two broad types of unit. The 'teeth' are combat formations that directly engage the enemy, whilst the supporting arms are collectively known as the 'tail'. In a small-scale insurgency the force involved might be primarily 'teeth' but as soon as an army grows to a respectable size it begins to require an extensive 'tail' of supporting formations as well as some that straddle the line between the two.

The primary combat forces used by the belligerent powers would be recognised by soldiers of almost any technological era: infantry, artillery and cavalry. Each has its own strengths and weaknesses, and all are most effective when cooperating with a different type of unit. There are two ways to develop this combined-arms capability. The first is to create units of a single type and form them into a higher formation. Alternatively, it is possible to create multi-capability units. This is not usually cost-effective but can enable a small force to deal with a wide range of circumstances, which may be important when operating weeks from the nearest support. More commonly, however, combined-arms capability is put in place at a higher organisational level.

Both the Zhodani Consulate and the Third Imperium favour combined-arms operations by highly technological forces, with lift infantry as the primary ground combat force. Lift infantry fight on foot but

INFANTRY FIREPOWER

The infantry component of most armies is typically built around small groups of three to six individuals, which will include a leader and usually someone with a heavier weapon than their comrades. It is easy to assume that bigger guns are better but the typical infantry weapon is relatively light and easy to handle. This allows most of the soldiers in a unit to react more immediately to threats and move more quickly between positions. Arming the support gunner with something ridiculously large would limit the mobility of the unit as a whole, so squad-level support weapons tend to be only a little heavier than the standard rifle. Indeed, in many cases the only difference is a heavier barrel (to dissipate heat) and a larger ammunition capacity.

operate closely with their transports, which are grav-mobile. Other troop types, such as armoured combat vehicles and artillery, support or spearhead the infantry operations. The Darrians follow Imperial practice whilst the Sword Worlds take a slightly different approach.

The 'teeth' units require a great deal of supporting 'tail', all of which absorbs tremendous resources. Logistics units keep the fighting formations supplied, and without the maintenance and repair formations the high-tech combat units will rapidly degrade in effectiveness. Add in the need for medical, intelligence, command and communications units the forces of both sides are restricted by the length and weight of their tail.

Some formations appear to straddle the line between teeth and tail. Combat engineering formations can fight but are primarily intended to clear the way for the teeth units or facilitate the movement of support. Orbital and aerospace defence formations often act as a shield for friendly units, preventing them from being pounded into wreckage from orbit, yet at the same time are vulnerable to attack by enemy ground forces.

INFANTRY FORMATIONS

Infantry formations are characterised by being formed primarily of personnel who fight on foot. There is a limit to how much equipment and weaponry can be carried by an individual soldier and to how much personal protection is possible. As a result infantry tend to be vulnerable to all weapons they might encounter. Nevertheless, infantry are vital to almost all operations. Armoured vehicles and artillery weapons can deliver more firepower but taking control of an objective – as opposed to obliterating it – requires sending an infantry force in.

The main problem faced by infantry forces is lack of mobility. A small unit in static defensive positions may have little need for vehicles but in all other cases an infantry force requires transport. This problem is solved in some armies by integrating vehicles in the infantry force structure whilst others partner an infantry unit with a specialist transport formation. Vehicles may mount support or anti-aerospace weapons and be integrated into the unit's combat style but since the infantry are the primary combat force and almost always dismount to fight on foot the 'infantry' designation is retained. A qualifier is usually added to indicate mobility type, sometimes along with an additional designation such as 'heavy' or 'light'.

Light Infantry have few support weapons. They may wear lighter personal armour than standard infantry formations. These units are primarily trained for security and urban combat operations, or for occupation duties. Partnering with a transport formation creates a light motorised, mechanised or lift infantry formation.

Infantry (or 'line infantry', or 'rifle' formations) are the standard infantry forces and are well-equipped with support weapons. They do not have enough vehicles to provide mobility to the whole force, although there will be some for utility purposes. A line infantry formation can be turned into a mechanised, motorised or lift infantry formation by pairing it with a transport formation.

Heavy Infantry are equipped with lavish support weapons, although their personal armour is likely to be the same as line infantry. Heavy infantry are relatively uncommon but may form part of a defensive force assigned to a fortress or garrison.

Motorised Infantry have sufficient transport for the whole formation, either as an organic part of the force or as a partnership. Motorised formations are normally equipped with wheeled vehicles lacking significant protection or weaponry. Where a force has a mix of vehicles, the lightest designation generally applies. For example, an infantry force riding in wheeled trucks but with a few light grav vehicles would still be considered a motorised force.

Mechanised Infantry operate in conjunction with heavier vehicles which are equipped with potent support weaponry. The vehicles themselves may be wheeled or track-layers, or in some rare cases hovercraft. What sets mechanised units aside from motorised ones is the survivability and combat capability of the vehicles.

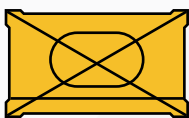
Lift Infantry formations contain a grav-mobile transport element. The vehicles will almost always be armoured and carry support weapons, and typically fight in close cooperation with the infantry component. Light lift infantry formations, with troops riding in vehicles such as air/rafts and civilian-type grav trucks, are sometimes formed as an expedient or for special purposes.

Jump Infantry units are trained to deploy directly from space in a 'meteoric assault' using personal assault capsules. Jump infantry units maximise firepower but need rapid resupply after an attack to avoid running short of ammunition and other supplies. Jump units are trained for the high-speed ground assault role as well and are sometimes used to breach enemy installations or defensive structures. Jump Infantry may be equipped with combat armour or powered battle dress.

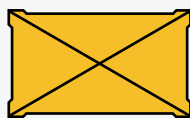
Armoured Infantry units are equipped with powered battle dress, requiring extensive support but representing the ultimate in foot-mobile combat power. Some, but not all, armoured infantry formations are trained for meteoric assault.

Protected Forces units are trained to fight in hazardous environments, which usually means airless worlds or those with a hostile atmosphere. They are typically equipped with combat armour similar to that of the line infantry but are armed for their expected environment, for example using lasers for combat in very low gravity.

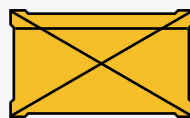
Assault formations specialise in close assault of enemy positions, emphasising high intensity firepower and aggressive tactics. Protection may be lighter or heavier than standard infantry, as sometimes speed is more important than resilience. A range of assault formations are possible, including units trained to capture starships and space installations.



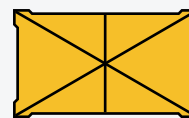
Light Infantry



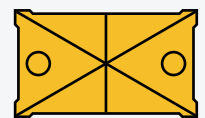
Infantry



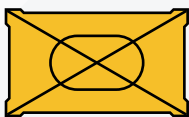
Heavy Infantry



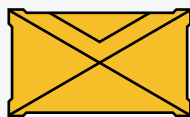
Motorised Infantry



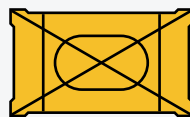
Mechanised Infantry



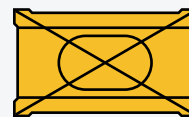
Lift Infantry



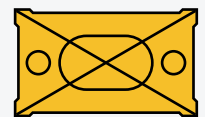
Jump Infantry



Armoured Infantry



Protected Forces



Assault Forces

ARTILLERY FORMATIONS

Artillery formations are built around heavy weapons such as traditional guns and howitzers as well as missile systems and energy weapons. Direct-fire heavy support weapons and aerospace defence units also fall under the artillery banner. Static weaponry is only useful in defence but might be essential in protecting key installations such as starports and military bases. For field operations mobility is essential and this usually means the heavy weapons are carried aboard a lightly armoured vehicle. Semi-mobile artillery, the equivalent of the traditional towed artillery, is not often encountered but can be a cost-effective way of strengthening a field force. It is vulnerable to being overrun by more mobile units, however.

Light Artillery formations typically use indirect-fire weapons that lob a projectile in a high arc such as mortars and howitzers or gun-howitzers. The difference between these weapons comes down to the barrel length; gun-howitzers can achieve a higher muzzle velocity than a shorter howitzer and are therefore more effective in a direct-fire role. Artillery vehicles are in general less protected than those intended for direct combat so using them for direct fire support increases losses. Light artillery can be mounted on grav, wheeled or tracked vehicles, or moved to its firing point by separate vehicles.

Field Artillery formations form the backbone of most armies' indirect-fire support. Explosive projectiles are standard, causing damage by fragmentation and blast, but incendiary and smoke rounds are also common. Field artillery can use guided shells and specialist munitions such as artillery-scattered mines. Transportation can be by way of wheeled, tracked or grav vehicles.

Heavy Artillery is normally available only to large formations. As with other artillery weapons the means of propulsion can vary; at higher Tech Levels electromagnetic mass drivers are preferred to conventionally propelled munitions. The function of these weapons is similar, however. Heavy artillery is usually mounted on track-laying vehicles or grav vehicles intended to ground and deploy stabilisers before firing. Permanent emplacements are also possible to protect important targets.

FIRE AND SHOCK

Artillery systems are 'fire' weapons, intended to weaken and crumble the enemy force rather than delivering a decisive blow. Sufficient firepower can flatten a target or annihilate an enemy formation but this level of overkill is a waste of resources and will leave the target valueless. Fire weapons are best used in conjunction with 'shock' weapons, such as an armoured vehicle attack or an infantry assault. A combination of 'crumble' and 'smash' can send an enemy force reeling back in disordered retreat, obtaining a useful result for limited expenditure of resources.

Siege Artillery is the heaviest category of artillery weapons, deployed to protect installations and cities or to reduce them to rubble. Siege artillery is normally found in specialist formations rather than as part of a field force.

Rocket Artillery uses rockets rather than conventional or mass driver guns to launch a payload. The relative lack of recoil enables a rocket system to be mounted on a lighter vehicle than a gun system and rockets can be launched in rapid succession allowing the launch vehicle to 'shoot and scoot' in order to avoid return fire. More advanced rocket systems use guidance, which arguably puts them in the category of missiles. However, these guidance systems tend to be cheap and rely on signals from satellites or vessels in orbit, making rocket systems less accurate than a precision-guided missile. Rocket systems are ideal for saturation bombardment of static positions.

Missile units use precision-guided missiles, which can range from infantry-launched anti-armour weapons to long-range bombardment missiles. Missiles are differentiated from rockets by the sophistication of their guidance system, which will typically be able to perform an evasive or optimised approach and to hit a target with great precision.

Anti-Armour formations are generally considered to be artillery. They range from direct fire weapons such as high-velocity guns and powerful lasers to missile systems. Vehicles outfitted for this role, but which are not as well-protected as tanks, are normally termed 'tank destroyers'. They are outmatched in open combat against actual tanks but when firing from concealed or protected positions they can be highly effective.

Aerospace Defence formations are optimised for defence against flying opponents. They can range from infantry support weapons such as a VRF Gauss Gun mounted on a fast-slewing, high-elevation mount to long-range missile systems.

Orbital (or Planetary) Defence formations are equipped with weapons capable of hitting a space vessel in orbit. The cheapest of these are Planetary Aerospace Defence (PAD) missiles, which are usually stored in and launched from hardened silos protected by lighter aerospace defence weapons. The deep-site meson gun is a far more potent weapon but expensive to build and maintain. Such weapons are normally sited in deep bunkers and can fire on any target within range so long as they have targeting data. Meson weapons can essentially shoot through the planet.

MOBILITY, PROTECTION AND FIREPOWER

When designing an armoured vehicle, there is always a balance between mobility, protection and firepower. Even if cost is no object there are trade-offs to be made. A larger power plant is necessary to maintain mobility if thick armour is added, but this takes up space that could be used for weapons. Making room for a suitable weapon might require enlarging the hull, which means a greater area to armour and increased weight which once again pushes up the amount of power plant needed. Some users try to balance these factors whilst others concentrate on only one or two, creating heavily armoured but slow weapon platforms or lightly protected and fast tank destroyers. Armament is rarely skimped on, as this renders the vehicle pointless.

CAVALRY FORMATIONS

The term 'cavalry' is used as a catch-all for formations where the primary fighting component is direct-fire weaponry mounted on vehicles. It can also be applied to traditional mounted cavalry, although forces of this sort are extremely rare in the present conflict, and also to some highly mobile formations which do not otherwise fit the designation. Formations based on wheeled and ground vehicles are included in the cavalry family, although they tend to be the preserve of planetary armed forces and the Sword Worlds Confederation.

The majority of cavalry formations used by the Imperium and the Zhodani Consulate use gravitic propulsion, giving them an enormous advantage over ground units in terms of mobility and tactical flexibility. By convention, most armoured combat vehicles are known as grav tanks, although more formal and specific designations are used at times.

Grav Armoured formations are uncommon. Consisting of a grav tank force supported by grav-mobile infantry and artillery, grav armoured formations form the spearhead of a planetary attack or counterattack, and are designed to go head-to-head with equivalent forces. The Consulate and the Imperium both use their grav armoured formations for large-scale attacks and counterattacks, operating en masse as a sledgehammer to crack open the enemy force after which lift infantry finishes the job.

Grav Cavalry forces fall somewhere between armoured and lift infantry formations. 'Cavalry' in this context refers to an integrated force of infantry riding armoured fire-support/transport vehicles with light grav armour and artillery in support. These units are well suited to rapid reaction or exploitation operations and may lack sustained fighting power.

Grav Recon forces are light armoured formations optimised for highly fluid operations. They are used to conduct reconnaissance but also to secure flanks and provide rear-area security. Grav recon formations are often added to a lift infantry force to increase firepower or provide mobile fire support.



AEROSPACE FORMATIONS

Grav vehicles blur the line between aircraft and vehicles but the design of any given vehicle places it on one side or the other. Grav tanks and the grav sleds used as the basis for armoured transport can fly as high as low orbit, but generally remain close to the ground to limit detection and tracking range. This is one reason grav tanks mount their weapons on the top, in a turret. It is always possible to tilt the vehicle to fire downwards but the turret configuration allows the tank to hide behind terrain obstacles. The same comments apply to vehicles intended for the near-ground operations. Threats are likely to be coming in from above the vehicle or its current level, making bottom mounted weapons ineffective.

Vehicles that are intended to operate more like aircraft and aircraft themselves, fly at an altitude anywhere between nap-of-earth (very close to the ground) to the upper atmosphere. Conventional aircraft are not likely to be used by the major belligerents but some planetary armies may employ them. Grav-powered aerospace vehicles fall into three categories: interceptors, speeders and gunships.

Interceptor Formations are intended to prevent enemy forces from reaching the ground. They typically operate from ground bases but may be launched from orbital platforms. These are high-speed vehicles which typically carry oversized weapons to give them a chance of shooting down incoming assault shuttles. Interceptors trade protection and agility for this capability and are often considered a weapon of desperation.

Speeder Formations operate light, fast aerodynamic grav vehicles intended to fight similar craft or make deep strikes on a distant enemy. They are more manoeuvrable and sometimes better protected than interceptors and carry aerospace-superiority rather than anti-spacecraft weapons. Formations are normally optimised for aerospace superiority or the strike role.

Gunship Formations operate relatively slow and bulky vehicles functioning as fire support platforms. They are differentiated from grav tanks by mounting weaponry on the sides or underneath the vehicle. Gunships are designed to shoot down at enemy positions and expect to take a great deal of return fire. They excel at hiding between tall buildings, popping out to act as flying fire support platforms in urban combat.



Light Artillery



Field Artillery



Heavy Artillery



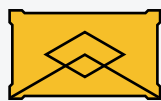
Siege Artillery



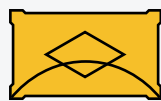
Rocket Artillery



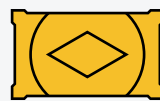
Missile Formation



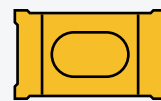
Anti-Armour Formation



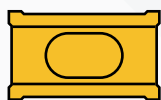
Aerospace Defence
Formation



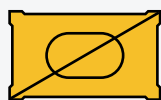
Orbital Defence
Formation



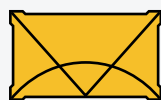
Grav Armoured
Formation



Grav Cavalry
Formation



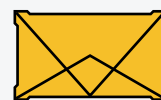
Grav Recon Formation



Interceptor Formation



Speeder Formation



Gunship Formation

SUPPORTING FORMATIONS

Troops such as combat engineers are often attached to combat formations but not normally expected to directly engage the enemy. They are typically equipped with a variant of the same transport used by lift infantry, or with a modified tank. These vehicles are often repurposed examples of the previous generation of armoured vehicles. Whilst not as effective as they once were, they improve cost-effectiveness of the force as a whole, and are usually more than sufficient to deal with the relatively minor threats they face. Similarly, formations such as electronic warfare, communications and medical are usually equipped with the same vehicle.

MARITIME FORMATIONS

Conflict on water is not common in the Fifth Frontier War and grav vehicles make the distinction between land and water largely irrelevant. For the most part significant maritime formations will exist only where internal conflict is likely, such as heavily balkanised world. Coastal patrol vessels may be in use by some planetary armies and occasionally a surface ship or submarine may be used as a platform for aerospace defence missiles or a meson gun.

HOSTILE ENVIRONMENT FORMATIONS

Troops using grav vehicles and combat armour are, in theory, capable of operating in vacuum or actively hostile environments such as corrosive-atmosphere worlds. In practice, these roles are taken by specially trained and equipped forces. Both the Imperial and Zhodani armies maintain formations equipped to fight in low gravity and vacuum. These are typically equipped with laser weapons but use their army's

standard combat armour. Formations are little different to the rest of the army, although deployments tend to be small compared to troops operating in a more conventional environment. There are exceptions but for the most part vacuum worlds have little worth fighting over outside the settlements, and those provide a suitable environment for ordinary troops.

MARINE FORMATIONS

Both the Imperium and the Consulate possess forces that might be termed 'marines', although the Zhodani use a different term to describe them. The Imperial Marine Corps is a separate organisation from the army and navy, composed mostly of infantry units. It does have its own artillery, armoured and support formations but these are very much a minority since the marines generally operate in close conjunction with the navy. Marines typically deploy in small units for boardings or operations aboard space installations, but are also capable of large-scale ground combat.

Imperial Marines rarely deploy in more than battalion strength, so their formations are designed to be broken up and parcelled out where support is required. Full brigades are occasionally formed but even then it is more common to rely on army and navy support than to deploy a full range of supporting formations. Marine units are optimised for short-term extreme violence, such as storming an enemy starport or other critical location. Personnel are equipped at TL15, often with powered battle dress and fusion weapons. Such weaponry often represents overkill, and whilst this is not always a problem, the need to take an objective intact can necessitate the use of less potent weapons. Radiation is also a hazard, especially where there are unarmoured friendlies or noncombatants nearby. For this reason the marines use gauss rifles as their primary personal weapon.

The Sword Worlds Confederation does not have a marine corps as such but its space forces include naval infantry. These are trained for combat aboard ships and stations as well as mobile operations supported by naval assets. Units are equipped as light infantry and must rely on army support if deployed in the field. Laser rifles are the favoured personal weapon, although some member worlds arm their naval infantry with similar weapons to other ground forces.

The Zhodani equivalent to the marines is the Naval Special Landing Force, which is drawn from naval personnel and included within its chain of command. Zhodani army units operate in closer conjunction with the navy than their Imperial equivalents and can cover most requirements, so the NSLF is reserved for specialist operations such as raids or attacks on space installations. Laser weapons are favoured.

RANK AND MILITARY TRADITION

The Imperial Army is based, more or less, on the military formations of Old Terra. Traditional names are used for formations and ranks, and in general formations are more permanent than their Zhodani equivalents. An Imperial soldier can expect to be part of the same company, which is part of the same battalion, for many years or perhaps their entire career. On the other hand, Zhodani formations are more temporary, with personnel and sub-units moving between larger units on a frequent basis. The Consulate tends to field larger formations than the Imperials, building them out of a greater number of sub-units, which are smaller than their Imperial equivalent.

The two other major participants in the Fifth Frontier War are the Darrian and Sword Worlds Confederations. The Darrians draw their military traditions from the same source as the Imperium and have a long history of cooperation with Imperial units. The Sword Worlds follow a different practice which is in many ways akin to the Zhodani model – although they might be seriously offended at anyone who pointed that out.

All four powers use a system of enlisted personnel and commissioned officers who lead and command them. Enlisted personnel are far more numerous than commissioned officers, who receive a much more comprehensive military education than their

subordinates. Junior enlisted personnel are expected to follow the direction of their superiors and be competent in their own field of expertise. More experienced (and higher-ranked) enlisted personnel often work with and become advisors to far less experienced officers. This can create an effective partnership based on mutual respect... or it can become a clash of egos which undermines morale and combat capability.

Some militaries have ranks that overlap the enlisted/commissioned system. These are typically held by very senior enlisted personnel or those who are transitioning from enlisted to commissioned status. The usual approach to creating officers is a formal college-style course of training, or a shorter course for those who have gained experience in the ranks. The alternative is for prospective officers to take on some command responsibilities and receive on-the-job training. Alternatively, some highly skilled positions come with rank attached but may be held by people who are good at the specialism but who are not good leaders. A number of titles are used for these not-quite-officers, such as warrant officers (as opposed to formally commissioned officers), and they are variously considered senior enlisted, very junior commissioned or part of a separate rank structure.

Officer cadets have not yet received their commission but may in some cases be assigned to formations in the field. Historically there have been fighting formations thrown together from officer cadets, although this is usually done out of desperation and on a temporary basis. Junior commissioned officers lead relatively small formations or fulfil technical and skilled functions, and fight alongside their soldiers. Field-grade officers command more significant forces and have a more managerial role even in combat, whilst general officers command large groups of units and are tasked with strategic control. The exact terms for these ranks vary from one force to another.

The Rank Equivalency tables indicate approximations across the four main belligerent powers.

It should be noted that Zhodani higher formations vary more in composition and size than their equivalents elsewhere. They also change over time as units are transferred in and out. For this reason the level of officer required to command the force can vary, as can the number of sub-units.

Enlisted Rank Equivalency

Rank	Title			Notes
	Imperial/Darrian	Zhodani	Sword Worlds	
E0	Recruit	Recruit	Rekrut	Soldiers who have not completed their training hold the rank of Recruit or its equivalent. They will not be committed if there are other options but sometimes gaps just have to be plugged. Recruits may be awarded the rank of Private when they deploy, or considered to have completed training after a period in the ranks.
E1	Private/Private First Class	Trooper/Follower	Menig	The typical ordinary soldier holds the rank of Private. As they gain experience most progress to leadership positions whether they intended to or not. The Sword Worlds rank of Menig (ordinary soldier) is broader than in many militaries. There is no equivalent of Private First Class or Lance Corporal.
E2	Lance Corporal/Corporal	Leader of Five	Korporal	Corporals provide leadership at the squad and section level, and also fulfil many technical functions that require greater education than the typical recruit might possess.
E3	Junior Sergeant (Lance Sergeant/Sergeant)	Leader of Ten	Sergeant	Junior Sergeants are found in junior leadership positions such as assisting a platoon commander or carry out administrative and technical functions.
E4	Senior Sergeant (Staff Sergeant)	Leader of Twenty/Leader of Fifty	Seniorsergent	A Senior Sergeant is typically the senior non-commissioned officer in an infantry company or an equivalently responsible position.
E5	Master Sergeant (Senior Master Sergeant/Chief Master Sergeant)	Leader of One Hundred/Leader of One Thousand	Chefsergent	Master Sergeants are extremely experienced non-commissioned officers. One will be the most senior sergeant in a battalion and many are assigned to the staff of senior officers.



Officer Rank Equivalency

		Title		Notes
Rank	Imperial/Darrian	Zhodani	Sword Worlds	
—	—	—	Forebild	An enlisted soldier who has been commissioned in the field and done an officer's job but is unable to meet the retroactive qualification requirement, or who or chooses to return to the ranks, is honoured with the title of Forebild. These soldiers are considered almost-officers and highly respected but have no formal leadership responsibility. Instead, they raise the overall standard of the army by example and would be followed without question by any Sword Worlds soldier. There is no real equivalent in the armed forces of other belligerent powers.
O0	Officer Cadet	Waiting Officer	Kadet	A Cadet has not yet received their commission, usually because they have not completed training. In Sword Worlds usage the term Kadet is applied alongside an officer rank (such as Kaptajn-Kadet) for those who have been commissioned in the field but have not had their new rank formalised. Used solo it indicates an officer in training who will graduate as a Loejtnant.
O1	Second Lieutenant	Officer of Twenty	Loejtnant	The most junior of the commissioned officer ranks, a Second Lieutenant will typically command a platoon or equivalent, or be assigned to assist a more senior officer such as a company commander. In such roles the Lieutenant may have a specialist task such as logistics or intelligence, or they may be a 'floating asset' to be assigned whatever tasks need doing.
O2	First Lieutenant	Officer of Fifty	Premierloejtnant	Senior Lieutenants may command a platoon or its equivalent, or may be assigned to assist a more senior officer.
O2	Captain	Officer of One Hundred	Kaptajn	A Captain normally commands a company or its equivalent, or is part of the command team in a formation led by a higher-ranked officer.
O3	Major	Officer Advisor	Major	Major is largely a 'staff' or support rank, although some company-equivalents are led by a Major. Most of the staff functions of a battalion, such as intelligence and logistics, are handled by Majors.
O4	Lieutenant-Colonel	Officer of Five Hundred	Oberstloejtnant	Battalion-sized units are commanded by a Lieutenant-Colonel or equivalent in most militaries. Some Lieutenant-Colonels serve on the staff of Generals.
O5	Colonel	Officer of One Thousand	Oberst	In most armies, Colonel is a 'staff' rank, although Zhodani battalions may have a Colonel-equivalent in charge as they are larger than their equivalents elsewhere. Some Colonels command army brigades, holding a temporary rank of Brigadier General, while others head important projects or serve on the staff of general officers.

General Officer Equivalency

		Title		
Rank	Imperial/Darrian	Zhodani	Sword Worlds	Notes
O6	Brigadier General	Officer of Two Thousand or Officer of Five Thousand	Brigadegeneral	A Brigadier General commands a force of brigade size or equivalent. Where possible this is a fully qualified general officer but it is common to find acting Brigadier Generals in place, who hold the permanent rank of Colonel.
O7	Major General	Officer of Five Thousand or Officer of Ten Thousand	Generalmajor	A Major General will command a force of division size or equivalent. In the Zhodani forces the equivalency is looser due to the practice of fielding forces of a different size and composition to other powers.
O8	Lieutenant General	Officer of Ten Thousand or Officer of Fifty Thousand	Generalloejtnant	A Lieutenant General commands a force of corps size or its equivalent.
O9	General	Officer of Fifty Thousand or Officer of One Hundred Thousand	General	A full General commands an entire army.
O10	Field Marshal	Officer of Millions	Marshal or Grossmarshal	A Field Marshal commands an army group consisting of multiple armies. In Sword Worlds usage the commander-in-chief of an entire world's armed forces holds the rank of Marshal, as do a small number of Confederation officers qualified to coordinate the actions of multiple very large forces. Grossmarshals command the forces assigned to entire regions of the Confederation.



BRIGADIER GENERAL



MAJOR GENERAL



LIEUTENANT GENERAL



GENERAL



FIELD MARSHAL

WEAPONS AND EQUIPMENT

The Fifth Frontier War pits what appear to be two broadly similar militaries against one another. However, there are significant differences between the Imperial and Consulate armed forces, which become apparent upon closer inspection. Lesser participants – including planetary armies, pirate bands and even the Sword Worlds Confederation – will take a different approach to the Imperium and Consulate according to factors shaping their forces.

It is easy to look at a military force from the outside and ask ‘why don’t they just...?’ but those who advocate creating unstoppable deathstacks of stronk units do not appreciate the complexity of military procurement. All armed forces are subject to influences such as the availability of technology and funding, recruitment capability and the force’s intended role. It is never possible to predict exactly what a force will need in the future and even if that were possible practical considerations would still force a compromise.

Arms contracts are extremely lucrative, especially on such a large scale, so procurement decisions are influenced by rich and powerful people who stand to benefit one way or another. A munitions or vehicle manufacturing plant creates hundreds or thousands of well-paid jobs, which will enhance the popularity of the political figure who persuaded the authorities to site one at this location or to issue the contract. This is less of a factor in the Zhodani Consulate, where such matters are more centralised, but in the Imperium military procurement is as much about who gets the money as obtaining useful military equipment.

The Imperial Army is equipped, for the most part, at a uniform TL12. This increases the number of worlds that can benefit from arms contracts and avoids using TL15 manufacturing capabilities that might better be supporting the navy. While less than ideal from a pure capability point of view the choice of TL12 equipment represents a trade-off offering political, social and financial benefits to those in power.

It is rare for the Imperial Army to face an opponent in its own class. Far more commonly, relatively small forces are sent to deal with an insurgency or a rebellion. In

many cases the army will face mid-tech opposition which it greatly outclasses. The ability to annihilate such opponents and fight effectively against a more advanced foe is considered ‘good enough considering all the other factors’ by the powers that be, although soldiers on the ground might disagree.

The Zhodani Consulate has a more centralised approach to military procurement. There are still many influences which are not directly connected with absolute capability but overall the process is driven by opinions about what is best for the Consulate rather than attempts to make as much money as possible from the arms trade. One indication of this is the way the Consulate makes much less use of branding. Where the Imperials feel the need to give their weapon systems evocative names, the Zhodani do not. There is one standard service rifle, one battlefield fusion gun and one medium range aerospace defence weapon, all identified by the central logistics system rather than a name applied by a hopeful seller.

The Darrian Confederation obtains most of its military equipment from Imperial sources, some of which have manufacturing plants in Darrian space. Equipment is more or less identical in the majority of cases and is generally employed in the same manner. The Sword Worlds, on the other hand, have a rather chaotic procurement system although most member worlds subscribe to agreements over general weapon design, calibre and features.

TOOLS AND ENABLERS

Soldiers frequently find themselves facing problems that require a solution other than violence. This does not necessarily mean violence will not be applied, but experience has shown that certain tools make a soldier’s life easier and/or longer. Most notable of these is a humble digging tool.

Almost all military forces issue some variation on the traditional ‘entrenching tool’. Even in the TL15 battlespace it is occasionally necessary to dig a hole in the ground by hand and tools of this sort can also be used to break in doors or light walls, to smash

Weapon	TL	Range	Damage	Kg	Cost	Magazine	Magazine Cost	Traits
Entrenching Tool	12	Melee	2D+2	0.5/0.75	Cr50	—	—	—

Item	TL	Kg	Cost
Cord and Anchor	12+	1	Cr200
Climbing Kit	12+	2	Cr500
Grav Belt	12	6	Cr100000
Utility Items Pack	12+	1	Cr100



ENTRENCHING TOOL



CLIMBING KIT



GRAV BELT



UTILITY ITEMS PACK

open recalcitrant crates, and as emergency close-combat weapons. The standard TL10+ version is typically referred to as something like 'field tool, utility' or something equally bland but these items are almost always called entrenching tools by those who use them.

There are two general types. One is a folding shovel weighing about 500 grams; the other weighs 750 grams and comes as a handle and blade unit which must be fitted together and locked in place. The latter has a pick/spike on one side and a digging blade on the other. Both can be used as weapons, doing 2D+2 damage but suffering DM-1 to attack rolls due to their slightly unwieldy nature.

The ability to get up and down walls, collapsed stairwells and similar obstruction is considered vital by most armed forces. The most basic of assists is a length of cord and an anchoring device. With high-tech materials, strength is not a problem; the apparently flimsy climbing cord could actually be thinner and still take the weight of an armoured soldier but a certain thickness is required for grip. The availability of strong cord is also an asset when objects need to be dragged or secured.

A basic six metre length of climbing cord and an anchor is carried in every soldier's field kit, weighing two kilograms. A full climbing kit, with more rope, additional anchoring spikes and a harness, comes in at 3.5 kilograms. A grav belt would do the same job but at much greater cost. While the additional capabilities it offers might be useful, the expense of issuing grav belts to all infantry soldiers is not justified. Some personnel do make use of these devices, notably urban-combat units and some snipers.

Most militaries issue a variant on the 'utility items pack' to be carried on the belt or attached to body armour. Soldiers often throw away items they do not think they will need, adding others according to preference. A typical belt pack contains a small flashlight, chemical light sticks, a multitool made by the lowest bidder, a couple of snack bars and a field dressing or tourniquet. The whole package rarely weighs more than one kilogram.

OBSCURANTS

The battlespace of the Fifth Frontier War is criss-crossed by lasers of one sort and another. Rangefinders, designators, communications lasers and mapping scanners all use the visual spectrum and all can be countered by optical obscurants. One low-tech solution to these devices, which also provides protection from laser weapons, is to set something on fire. Smoke, mist, even heavy rain can all interfere with optical devices and weapons, which is one reason why lasers are not more popular with ground troops.

The standard obscurant is smoke produced by a chemical reaction within a grenade or artillery shell. This is relatively low-tech and by the starfaring era a more advanced version is available. This contains small metal fragments which are heated by the reaction producing the smoke, creating a cloud that is opaque to radar and thermal imaging as well as optical devices. Anti-laser aerosols follow a similar principle but are more persistent, providing protection for longer unless dispersed by wind. Aerosols do not block visible light but distort and scatter it, disrupting lasers and creating a shimmering rainbow haze which confuses other optical devices. Aerosol clouds are not opaque to radar and thermal imaging, although the latter may be distorted to some degree.

In addition to the usual grenade type obscurants, both sides have access to remote dispensers. These are small drones which fly a preset pattern or can be manually controlled. They can be reloaded with a canister of obscurant but are often lost when used in

Item	TL	Kg	Cost
Obscurant Dispenser Drone	12	1	Cr100
Obscurant Canister	12	0.5	Cr10

proximity to the enemy. A canister delivers sufficient obscurant (anti-laser aerosol or hot, radar-opaque smoke) to create a line one metre wide, two to three metres high and 10 metres long. A canister could be thrown, rolled or left emplaced to be triggered remotely, although it will not work as well. A canister on the ground will eventually fill a three cubic metre area, much more densely near the ground. Creative users might emplace some at a high point or stream them from a moving vehicle.

BATTLE MANAGEMENT SYSTEMS

It could be argued that backpack-type radios are a form of battle management system but the concept does not really become viable until TL8. Once it is possible to transmit data rapidly and securely, management systems can relay to a soldier on the ground what their comrades in the elevated observation position – or a satellite in orbit – can see. Personal systems do not get much smaller or larger as Tech Level advances; they become more capable for the same amount of bulk.

Early systems may display their data on a wrist unit or a fold-down chest-mounted screen, whilst more advanced units use a heads-up display in the soldier's helmet. The unit may be used in active or passive mode. In passive mode it only receives data and does not contribute to anyone else's 'big picture' display but has no detectable emissions. In active mode the emissions from the device can be detected but the soldier can send real-time images to add to the composite and also request support with great precision.

Resistance to jamming and hacking is the main feature of more advanced systems, along with greater range without needing a booster transmitter. The Security Index is used on checks to use the unit in an electronically cluttered environment and to resist attempts by the enemy to perform cyber attacks on the network.



OBSCURANT DISPENSER DRONE



Item	TL	Kg	Cost	Security Index
Basic Battle Management System	8–9	3	Cr25000	-3
Improved Battle Management System	10–11	1	Cr10000	-1
Advanced Battle Management System	12–13	Negligible	Cr5000	0
Z-Spec (Zhodani military specification) Battle Management System	14	Negligible	Cr2500	+1
I-Spec (Imperial military Specification) Battle Management System	15	Negligible	Cr25000	+2

SOLDIER-PORTABLE JAMMERS AND DECOYS

Obscurants provide passive protection against optical and some other sensors, and laser weapons. Active protection is not really possible against lasers and laser-guided weapons but those that use thermal or radio-frequency sensors can be defeated or deceived by active measures. Passive defence is achieved by reducing the thermal or radio-frequency signature of a vehicle or other potential target, using so-called ‘stealth’ technologies. Stealth does not make a target invisible; what it does is to reduce the distance at which a given sensor can detect and identify the target, enabling it to fade into the background. This is more effective when decoys are used to create a ‘noisy’ environment or attract the attention of enemy sensor systems.

Active jamming is a brute-force method which floods the ‘fourth dimension’ with electronic noise. It can be thought of as an electronic smokescreen which obscures everything within its range and beyond it.

Item	TL	Kg	Cost
Broad-Spectrum Jammer Unit	10+	1	Cr150
Decoy Unit	10+	0.8	Cr200
Decoy/Jammer Drone	10+	1	Cr100



DECOY/JAMMER DRONE

However, by its very nature jamming tells the enemy that something is going on and the jammer is highly obvious. Many missiles have a home-on-jam mode and will go after the jammer if they lose tracking on the target. Specialist anti-radiation weapons (radiation in the sense of radiated emissions) also exist. Some of these are large missiles intended to take out aerospace defence systems but both sides have developed small anti-jammer munitions. The Imperial version is designed to be launched from the muzzle ring of an advanced combat rifle, whilst the larger Zhodani variant is hand thrown. Both are aerodynamic, resembling toy planes. A rather more basic version is produced in the Sword Worlds.

Soldier-portable jammer and decoy units are also widely used by both sides. Decoys can be set to mimic the emissions of common electronic equipment or to broadcast a broad-spectrum ‘siren call’ intended to attract enemy munitions. The basic jammer or decoy unit can be worn as part of a soldier’s kit, or emplaced, or can be carried aboard a small drone. These tend to be expended quickly but have the advantage of not drawing anti-radiation weapons onto the user. Jammers and decoys grant DM+2 to Electronics (sensors or comms) checks, plus an additional DM+1 per Tech Level higher than that of the enemy.

INFANTRY DRONE SYSTEMS

The Imperial armed forces do not make use of warbots, in the sense of autonomous armed robots, although the Zhodani Consulate does. All combatant powers make use of small battlefield drone systems, mostly for reconnaissance. The standard Imperial model is designated Localised Reconnaissance System, Infantry-Portable (LORSIP), and more commonly known as a Looksee drone. It is carried in the form of a small cylinder which attaches to the grenade launching ring of an Imperial ACR. Once launched the drone unfolds its wings and discards the protective cylinder, flying autonomously, on a preset pattern or under direct control for up to an hour.

Looksee drones feed their data back into the battlefield management network, making it available for all troops and vehicles in the area. The drone itself weighs 500 grams, while the palm-sized control unit weighs 250 grams. This is only issued to troops who lack combat armour, as the launching soldier's suit electronics can provide guidance. Control can be passed to someone else if necessary.

The Imperial Army also uses an anti-personnel drone designated Semi-Autonomous Kill System, Infantry-Portable (SAKSIP). It is carried in the same manner as the LORSIP drone and once launched can be directed manually or a target can be picked for semi-autonomous guidance. SAKSIP drones, known universally as 'Assassin' drones, can be launched blind in 'hunter-killer' mode. This does not quite run afoul of the ban on warbots as there is a soldier just one decision point away from the kill, with a constant abort capability.

Typically one drone is issued to each soldier, of which about half are recon types. A cluster of six cylinders, positioned on a basic launch unit, weighs five kilograms with a collapsible tripod or can be mounted on most vehicles. Experiments with 'drone swarm' attacks from light vehicles have proven disappointing, mainly due to the relative ease with which control signals can be

jammed. Against lower-tech opponents these tactics have proved more effective, although the superiority of the combat-armoured Imperial infantry over such forces makes it more cost-effective to engage with rifle fire.

The Zhodani equivalent of the Looksee drone is a hand-thrown device resembling a small toy aircraft. It requires a few seconds to unfold the wings and start the motor but can then be deployed almost anywhere. Designated CCLS-Small Reconnaissance Drone but known colloquially as 'Difl', which translates very loosely as 'persistent unobtrusive observation', these drones have an endurance of three to four hours in a standard atmosphere and a very low signature making them hard to detect. The Consulate does not make much use of infantry kill-drones, preferring more capable warbots in a similar role. The Sword Worlds Confederation does not use small combat drones of this sort either.

Item	TL	Kg	Cost
Looksee Drone	12	0.5	Cr100
Assassin Drone	12	0.5	Cr175
Imperial Drone Cluster	12	5	Cr150 + 6 drones
CCLS-Small Reconnaissance Drone	14	0.75	Cr80



CCLS-SMALL RECONNAISSANCE DRONE

IMPERIAL DRONE CLUSTER

HAND WEAPONS

'War to the knife' is a figure of speech meaning no quarter will be given. Even in pre-spaceflight times the idea that soldiers might be down to their knives implied a truly desperate situation and in an era of meson guns and grav tanks this is even more so. Yet knives and bayonets are still issued. They are far more likely to be used as tools than weapons but soldiers are trained to ply their blades at need. The most likely scenario is during a stealthy infiltration but a bayonet charge can drive hostiles from their positions. The act of fixing bayonets is a psychological trigger for the troops, helping to mentally prepare them for what comes next. Commonly, an enemy facing a determined advance with fixed bayonets will choose to retire rather than enter close combat.

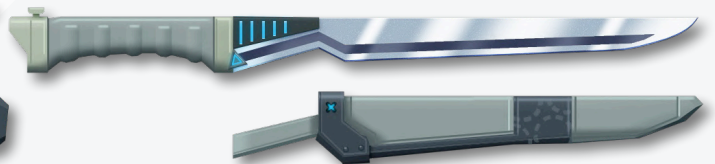
Both the Imperial and Consulate armies issue a conventional bayonet/fighting knife which can be combined with its scabbard to make a set of wire cutters. The Imperial version is designated K-14A in the standard cataloguing system. It is slightly smaller and more cheaply produced but otherwise very similar to the Zhodani model, which is simply known as a Combat Blade under the Central Consulate Logistics System (CCLS). For clarity, the Galanglic translation of Zhodani names for most weapon systems is used in this volume.

Experiments have been carried out by both sides with armour-piercing spike bayonets, constructed of extremely dense and hard material. Although these are at least marginally effective against body armour they are expensive and pose a hazard to the user. Where a knife can serve as a useful tool these weapons have no purpose other than to attack armoured troops during a close assault. As such, they remain a novelty and are unlikely to enter widespread service. It is possible that special forces personnel might find a use for such a device, although it is unlikely to be a head-on charge at someone in combat armour. There are reports that some Darrian units, which generally follow Imperial practice, have been issued with a similar weapon.

The military of the Sword Worlds makes use of two hand weapons, both of which originated as tools. The Seax is essentially an overgrown knife suitable for chopping undergrowth or the limbs of enemies. It has parallels in many other starfaring cultures, more commonly serving as a tool than a weapon. The Vaerktojsoks, or 'tool axe' is likewise intended more for utility than combat but can be formidable in a fight. In addition to personal issue Vaertojsoks, they can be found in rescue and survival kits, and are designed such that the haft can function as a crowbar and the weapon be used to secure a climbing or rescue line.



K-14A BAYONET/FIGHTING KNIFE



CCLS-COMBAT BLADE



Q-77AS ARMOUR-PIERCING SPIKE BAYONET



SEAX



DRESS SWORD

VAERKTOJSOKS

Weapon	TL	Range	Damage	Kg	Cost	Magazine	Magazine Cost	Traits
Imperial/Darrian								
K-14A Bayonet/Fighting Knife	12	Melee	1D+2	0.4	Cr10	—	—	—
Q-77AS Armour-Piercing Spike Bayonet	12/14	Melee	1D+2	0.6	Cr150	—	—	AP 5
Dress Sword	10+	Melee	2D	1	Cr250	—	—	—
Zhodani								
CCLS-Combat Blade Bayonet/Fighting Knife	14	Melee	1D+3	0.5	Cr15	—	—	AP 1
Sword Worlds								
Seax Knife	10	Melee	2D-1	1	Cr25	—	—	—
Vaerktojsoks	10	Melee, thrown 5m	2D+2	1.2	Cr35	—	—	—

Dress swords are not considered to be combat weapons and highly unlikely to be taken into battle. The Zhodani Consulate has a standard pattern issued throughout its military to non-commissioned officers and a more ornate one for officers. Imperial designs vary more, with cavalry formations favouring sabres and infantry issuing a variety of straight and curved designs depending on regimental traditions. Artillery and aerospace regiments tend to favour smallswords rather than sabres, although this is not universal. The Sword Worlds equivalent is the Holmgang Sword, which might be owned by any soldier who feels the need for one. As with other swords, use in combat is extremely unlikely.

MILITARY SIDEARMS

A sidearm is not generally considered a serious combat weapon. It is in part a symbol of rank, in part a weapon of emergency self-defence and might be used to enforce discipline under some circumstances. An officer might draw their sidearm to demonstrate the seriousness of their intent but if the unit commander is firing a pistol at the enemy the situation is not good. Sidearms are also issued to personnel who might need to defend themselves but cannot carry a full-sized weapon.

Both the Imperial and Zhodani armies normally issue gauss pistols to officers, even in units where the troops are using conventional firearms. The current standard Imperial weapon is based on a design produced by the megacorporation Instellarms in 1056, which is manufactured under license at TL13 by a variety of suppliers. It is essentially the same weapon as the 'navy model' but with a shorter barrel.

A compact model is also available, to be carried discreetly by personnel on diplomatic or low-profile security duties. Both weapons are chambered for 4mm darts, which are not compatible with those used in gauss rifles despite their being of the same diameter.

Both weapons are capable of single shots or a three-dart burst and carry an interface which ties them into the heads-up targeting system of standard Imperial combat armour.

The Zhodani version differs in that it has a longer barrel and is capable of fully-automatic fire. The Consulate does not consider the handgun as any more of a serious combat weapon than the Imperium does, with the exception of close combat in an environment such as a starship. The Zhodani weapon is the same as that issued to naval officers, manufactured at TL14 in centralised arsenals before being distributed to the end users through restricted supply channels. It feeds into the user's targeting electronics, if they have any, and comes with an accessory pack enabling the weapon to be converted into a sort of carbine.

The carbine version does not have a longer barrel but is extended rearwards by a skeletonised stock, enabling more accurate aimed fire. The stock can be configured conventionally, to be pulled in to the shoulder, or locked around the forearm to support and steady the weapon whilst leaving the user's other hand free.

Conventional handguns are sometimes issued where gauss weapons would pose a logistical difficulty. The Imperial Army standard handgun is chambered for 10x20mm ammunition, designated '10mm military', which is available on the open market and popular with

Weapon	TL	Range	Damage	Kg	Cost	Magazine	Magazine Cost	Traits
Imperial/Darrian								
M1087 Gauss Pistol	13	20m	3D	1	Cr500	40	Cr20	AP 3, Auto 2
M1087C Gauss Pistol, Compact	13	20m	3D-1	0.6	Cr600	25	Cr13	AP 3, Auto 2
M890A1 Handgun	12	10m	3D-2	0.9	Cr250	12	Cr8	—
M890A1C Handgun, Compact	12	10m	3D-2	0.7	Cr250	8	Cr6	—
Zhodani								
CCLS-Electromagnetic Handgun Gauss Pistol	14	25m, 50m with stock in place	3D+1	1.2	Cr600	40	Cr20	AP 3, Auto 3
Sword Worlds								
Palvelupistooli Revolver	10	10m	4D-3	1.6	Cr450	6	Cr15	—
Palvelupistooli (HEAP) Revolver	10	5m	3D-2	1.6	Cr450	6	Cr20	AP 2



M1087 GAUSS PISTOL



CCLS-ELECTROMAGNETIC HANDGUN GAUSS PISTOL



M890A1 HANDGUN



PALVELUPISTOOLI REVOLVER

law enforcement agencies as well as mercenaries and many private users. As with gauss pistols, a standard and a compact version are available. These weapons are manufactured at TL12 and can be considered the handgun equivalent of the advanced combat rifle. Various models are in service, all with the same configuration and characteristics. The commonest is the M890A1, a slightly updated variant of a design accepted for service over a century ago.

The Darrian Confederation, as usual, follows Imperial practice. The Sword Worlds, on the other hand, take a completely different approach. Their standard service pistol is a revolver, known as a Palvelupistooli – which is shortened to ‘stoolie’ by Sword Worlders and outsiders alike. It has a detachable cylinder allowing quick reloading, although multiple spare cylinders are heavy to carry. It is customary to issue three cylinders with a gun, along with additional loose ammunition. It is common to carry one cylinder pre-loaded with high-explosive armour-piercing (HEAP) ammunition which offsets the weapon’s relatively low muzzle velocity with a shaped charge effect.

IMPERIAL SMALL ARMS: THE ACR FAMILY

The Imperial Army is equipped mostly with items available at TL12, enabling defence contracts to be spread across the economies of multiple worlds. Contracts are lucrative but come with strict regulations and a contractor that fails to meet quality standards will be fined or even stripped of its license. Nevertheless, some firms try to produce military equipment on the cheap in order to maximise profits, so there is always the possibility of encountering a poor batch of weapons.

The standard small arms used by the Imperial Army are built around the 6x40mm round created for the advanced combat rifle. Known as ‘military ball’ or ‘military six-forty’ this round has reasonable penetration and accuracy but is relatively light and compact which makes carrying sufficient ammunition much easier. The standard advanced combat rifle is part of a family using the same receiver, with a common magazine and feed system.

The standard advanced combat rifle uses a conventional layout, with the magazine well-positioned in front of the trigger assembly and is fed from a 40-round magazine. Electronic sights are standard, with a physical backup and the weapon is programmed to integrate itself with the electronics of combat armour or independent targeting system.

The ACR can launch rifle grenades from an attachment ring on the muzzle. All infantry soldiers receive basic instruction on the use of these weapons, although it is common for a squad to have a designated grenadier who has received additional training. High-explosive dual-purpose (blast and fragmentation) grenades are most common and useful for taking out enemy infantry positions. A skilled grenadier can drop a grenade into a trench or similar position that lacks overhead cover. Shaped-charge grenades are also sometimes issued, giving infantry some capability against lightly armoured vehicles or bunkers.

A squad support variant, with a longer barrel and a bipod, is carried by support gunners. It can take standard magazines but is often used with a 60-round casket magazine. These weapons are also mounted on pintles aboard some light vehicles. The near-complete commonality of components with the standard rifle eases the logistics burden and allows any soldier to take over the weapon, but the support variant is not a true machinegun. It lacks a quick-change barrel so can overheat during a protracted engagement.

The carbine version has a shorter barrel and a folding stock, and lacks the grenade discharger ring, but is otherwise broadly similar to the standard rifle. It is issued to troops whose primary function is not engaging the enemy with their personal weapons, such as anti-armour missile gunners and may in addition be carried by some officers.

Some units are issued a bullpup-configuration variant of the ACR. This allows the same barrel length on an overall shorter weapon and moves the centre of mass rearwards. This increases the speed with which the muzzle can be brought up and on target, and is popular with troops expecting to engage in urban combat. It is rare, but not unknown, for a unit to be armed with a mix of standard and bullpup ACRs.

A personal defence weapon variant, firing the same ammunition and taking the same magazines, is designated M44PDW. It is a bullpup-configuration weapon with a very short barrel and fold-down foregrip, intended for emergency use by vehicle crews and some close-assault units. Range is limited and penetration is lower than the standard rifle.

The standard ACR is designated M1068A3 and is well proven in service. Its support version is designated M1068H (for ‘heavy barrel’), whilst the carbine is designated M1074C. The bullpup configuration variant was recently – as these things go – replaced in service and is designated M1101.

Weapon	TL	Range	Damage	Kg	Cost	Magazine	Magazine Cost	Traits
M1068A3 ACR	12	500m	3D	3	Cr1000	40	Cr15	Auto 3, Scope
M1068H ACR (Support)	12	600m	3D	4	Cr1250	60	Cr25	Auto 3, Scope
M1074C ACR (Carbine)	12	350m	3D	2.4	Cr1000	40	Cr15	Auto 3, Scope
M1068A3 ACR (Bullpup)	12	500m	3D	3	Cr1000	40	Cr15	Auto 3, Scope
M44PDW ACR (Personal Defence)	12	100m	3D-2	1.9	Cr900	40	Cr15	Auto 3, Scope



M1068A3 ACR



M1068A3 ACR [BULLPUP]



M1068H ACR [SUPPORT]



M1074C ACR [CARBINE]



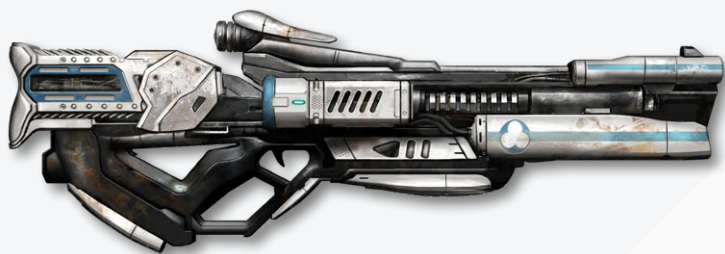
M44PDW ACR [PERSONAL DEFENCE]

ZHODANI INFANTRY WEAPONS

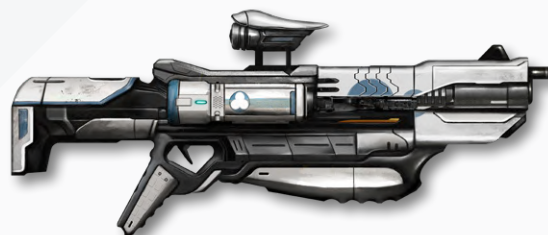
The infantry forces of the Zhodani Consulate are almost exclusively equipped with gauss weapons. The standard infantry rifle is capable of semi- or fully-automatic fire and has better armour penetration than the Imperial ACR. It is significantly more expensive to produce and maintain, and experts are divided on which system is more cost-effective. Zhodani gauss weapon ammunition is slightly heavier than its Imperial equivalent, using a 4.8mm dart which has better armour penetration. Standard practice is to issue five magazines in addition to the one in the weapon. If contact with lightly armoured vehicles is expected, one of these magazines will contain armour-piercing darts which are constructed of a denser alloy.

The squad support weapon is similar to the gauss rifle but is a separate design rather than a derived system. Gauss weapons do not suffer from barrel heating due to chemical propellant but their accelerator coils can overheat. The squad support weapon's higher rate of fire creates a more significant overheat problem than in a rifle, which is compensated for by heavy-duty coils. This makes the support weapon relatively heavy but it is capable of more sustained fire than the Imperial equivalent and poses a threat to light vehicles.

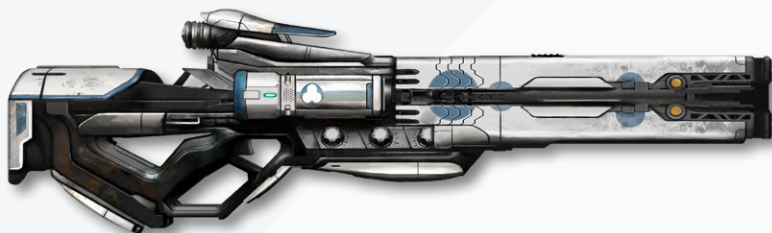
A gauss carbine is carried as a personal defence weapon by soldiers too encumbered for anything longer or heavier, such as vehicle crews and grenadiers. The carbine is significantly smaller than anything the Imperials would call a carbine and is sometimes



CCLS-INFANTRY GAUSS RIFLE



CCLS-GAUSS CARBINE



CCLS-SQUAD GAUSS SUPPORT WEAPON



CCLS-INFANTRY 28MM GRENADE LAUNCHER

Weapon	TL	Range	Damage	Kg	Cost	Magazine	Magazine Cost	Traits
CCLS-Infantry Gauss Rifle	14	750m	4D	3.8	Cr1500	80	Cr40	AP 6, Auto 3, Scope
CCLS-Squad Gauss Support Weapon	14	750m	4D	14	Cr3500	200	Cr100	AP 6, Auto 5, Scope
CCLS-Gauss Carbine	14	200m	4D-3	2.4	Cr1500	40	Cr20	AP 3, Auto 5, Scope
CCLS-Infantry 28mm Grenade Launcher	14	250m	As Grenade	4.7	Cr600	5	As Grenade	Bulky, Scope
CCLS-Grenade, 28mm HEDP	14	250m	4D	0.4	Cr25	—	Cr125	Blast 6
CCLS-Grenade, 28mm Obscurant	14	250m	—	0.4	Cr25	—	Cr125	Blast 6
CCLS-Grenade, 28mm Concussion	14	250m	3D	0.4	Cr25	—	Cr125	Blast 6, Stun
CCLS-Grenade, 28mm HEAP	14	100m	4D	0.4	Cr40	—	Cr200	AP 12, Blast 3
CCLS-Grenade, 28mm Multiple Projectile	14	25m	5D	0.4	Cr20	—	Cr100	Pellet

referred to as a gauss submachinegun. However, it uses the same ammunition as the rifle. This weapon's short barrel does not permit its dart to reach the same velocity as a rifle would, reducing range, accuracy, penetration and stopping power. It is still a potent weapon at short range, however.

Zhodani infantry weapons do not have an integral rifle grenade discharger and are not constructed to carry an under-barrel grenade launcher as an accessory. Instead, some members of an infantry force are dedicated grenadiers. Their primary weapon is a 28mm rifle-configuration grenade launcher fed from five-shot magazines. Alternatively, a single grenade can be manually loaded into the breech. Standard ammunition is high explosive dual-purpose, with obscurant (hot smoke) and concussion grenades commonly issued. A direct-fire multiple projectile round is commonly carried for close urban combat or assault missions, with high-explosive armour-piercing (HEAP) rounds used against light vehicles. Standard load is one magazine in the weapon and four spares, with other soldiers in the squad carrying a magazine each. The grenadier is issued a gauss carbine for self-defence.

SWORD WORLDS SMALL ARMS

The standard personal weapon in Sword Worlds service is a semi-automatic rifle known as a Jaegergevar. Where other militaries prefer to give every soldier the capability to lay down intense suppressive fire, Sword Worlders prize marksmanship. Their weapons shoot heavier bullets but far less of them. This does reduce the logistics burden but much depends on the quality of the troops involved.

Given the highly independent nature of the Sword Worlds, forces from different worlds may use slightly different weapons under the same designation. Almost all variants use the same 8x50mm ammunition, although local preferences will dictate details such as barrel length and stock design. Most forces equip their rifles with a variable 1/4/2.5/4x sight with a clip-on magnification aid increasing this to 10x. A variant of the standard rifle, usually referred to as a Jaegerkarbin, is used by vehicle crews and urban combat units. Its shorter barrel and folding stock make it much more handy for close-quarters engagements but effective range is also reduced.

Both the Jaegergevar and Jaegerkarbin are fitted with a muzzle ring to allow rifle grenades to be used. Infantry personnel normally carry one rifle grenade and one hand grenade, with a mix of types within a unit. Most rifle grenades are either smoke or high-explosive-fragmentation types for anti-personnel work but some members of a unit will be carrying light anti-armour weapons which use a shaped charge warhead. These cannot harm a grav tank very much but can scrub off antennae and sensors, perhaps mission-killing the vehicle. Lighter vehicles may be penetrated or disabled.

The standard rifle grenade can also be delivered by a reusable launcher, designated PGA-40 (from Puska gránát indító, or 'rifle grenade launcher'). The launcher is little more than a metal stick with a handgrip, optical sights and a shoulder stock. Grenades are initiated by a small rifle-type cartridge, of which 20 are carried in an internal magazine.

Unguided grenades are no different in performance when launched this way but a larger version is also available which cannot be fired from a rifle muzzle. Designated PG-62, (from Páncéllenes gránát, or anti-armour



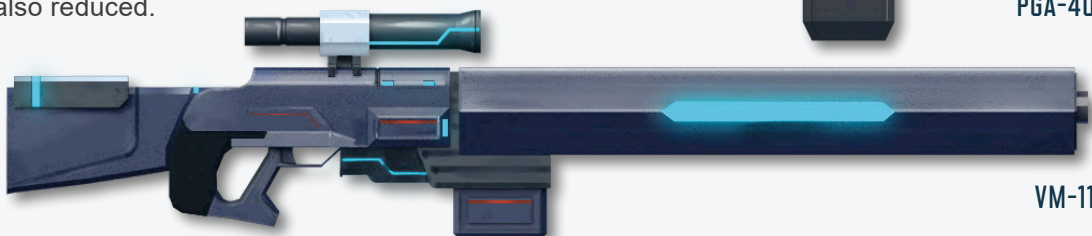
JAERGEVEVAR



JAEGERKARBIN



PGA-40



VM-11

Weapon	TL	Range	Damage	Kg	Cost	Magazine	Magazine Cost	Traits
Jaegergevar	10	300m	3D	3.5	Cr400	15	Cr10	Scope
Jaegerkarbin	10	200m	3D	2.8	Cr400	15	Cr10	Scope
PGA-40	10	300m	As Grenade	2	Cr50	1	As Grenade	Scope
PG-62 Anti-Armour Grenade	10	400m	4D	1.5	Cr70	—	—	Ap 10, Smart
VM-11	10	2,000m	3D+4	10	Cr1000	5	Cr20	AP 6, Scope

grenade and 62mm calibre) this weapon is a simple self-guided rocket with a shaped-charge warhead, offering modest anti-armour capability. It is most effective in the cluttered terrain of a city, where even grav vehicles have to move slowly between buildings.

A heavy sniping/anti-materiel rifle is also widely used. It is named VM-11 (from Voimakas Kivaari, or 'powerful rifle' and its 11mm calibre). This weapon is highly effective in urban environments, allowing troops stationed in high buildings to engage hostiles at great distances or to ambush enemies at close range in more cluttered terrain. The rifle uses an armour-piercing round that can penetrate light cover, body armour and even some vehicles.

ANTI-ARMOUR AND AEROSPACE DEFENCE

There is an old military adage that 'if you can't fight tanks, you can't fight'. The same is true about aerospace vehicles and in any case a grav tank can be considered to be both. Both sides field light shoulder-fired missile launchers as their primary infantry armour/aerospace defence weapon. The format is the same in both cases; a reusable launcher/sensor system is carried and operated by two soldiers, with additional missiles carried by other members of the squad. The same missiles are launched by light vehicle-mounted systems derived from the infantry version.

The Imperial Army uses two distinct missile types, designated anti-armour and aerospace defence. Both employ the same guidance and propulsion system but the anti-aerospace warhead is lighter and the missile overall faster and more agile. It is optimised for a proximity detonation against a light vehicle such as an attack speeder and will shred mid-tech strike aircraft. The anti-armour version uses a tandem shaped charge warhead which can automatically select side,

top or underside attacks based on target configuration. It is optimised for maximum penetration of armour, although any infantry-portable system is of marginal effectiveness against a main battle tank.

The standardised Imperial launch unit is a complete tube with sights, controls and the electronics package located at the centre point of the tube. It is reloaded by taking a missile out of its disposable packaging and inserting it into the weapon's breech from the rear. Launch is 'hot', in that the missile's own propulsion system is live throughout and creates a significant backblast. Anyone within three metres will suffer 3D damage from burns, although the launcher can be used from a small room by a user in combat armour. Unprotected personnel must find a clear area or larger space, or else suffer reflected backblast. As with many Imperial weapon systems, the missile can interface with the user's combat armour suit electronics.

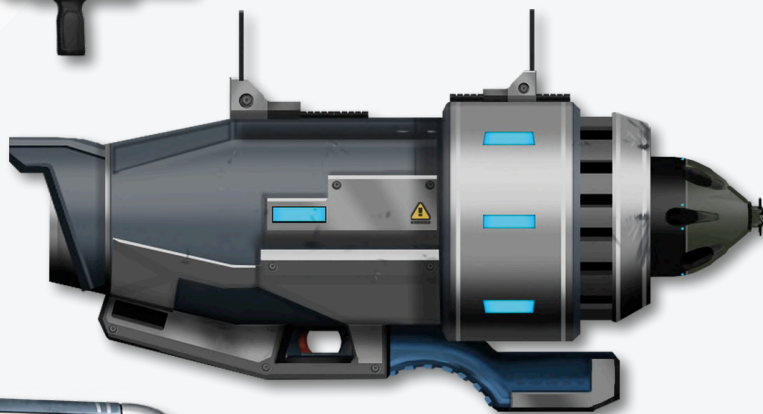
The launcher is designated UMS-88 (Universal Missile System, 88mm calibre), although it is most commonly referred to as the 'Reliant' missile system. A variant, using a pair of launch tubes on an open slewing mount, is available to arm light vehicles. It can be used to provide transport vehicles with a measure of aerospace defence, or to covert air/rafts into mobile anti-armour platforms. Designated VMS-88 and using the same missiles as the UMS system, this weapon is known in service as the 'Tinker', although the origins of this appellation remain obscure. The anti-armour missile is designated ATM-88 'Viper', whilst the anti-aerospace version is AFM-88 'Streak'.

The Zhodani missile system, known prosaically as CCLS-Infantry Missile System, is more flexible, employing a 105mm multimode warhead which can also be used as an artillery weapon against infantry positions. This is wasteful in Credit terms, as the missiles are more expensive than their Imperial equivalent but a trained soldier is a big investment

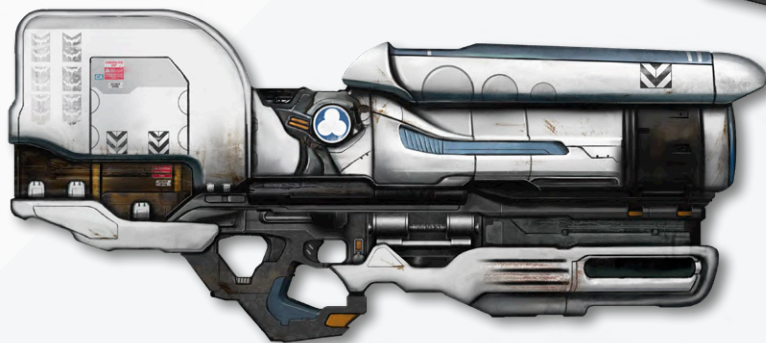
Weapon	TL	Range	Damage	Kg	Cost	Magazine	Magazine Cost	Traits
Imperial/Darrian								
UMS-88 'Reliant' Missile Launcher	12	—	—	12	Cr8000	—	As Missile	—
VMS-88 'Tinker' Missile Launcher	12	—	—	80	Cr24000	2	As Missiles	—
ATM-88 'Viper' Anti-Armour Missile	12	1,000m	5D	1.5	Cr6000	—	—	AP30, One-Use, Smart
AFM-88 'Streak' Anti-Aerospace Missile	12	2,000m	4D	1	Cr5000	—	—	AP 5, Blast 10, One-Use, Smart
Zhodani								
CCLS-Infantry Missile System	14	—	—	9	Cr11000	—	As Missile	—
CCLS-SM105	14	1,000m	6D	3.5	Cr10000	—	—	AP 15, Blast 8, One-Use, Smart
Sword Worlds								
Kevyt Raketinheitin	10	1,000m	—	6	Cr500	—	As Missile	Scope
KMA120 Unguided Projectile	10	1,000m	6D	4	Cr2000	—	—	AP5, Blast 5, One-Use



UMS-88 RELIANT MISSILE LAUNCHER



KEVYT RAKETINHEITIN



CCLS-INFANTRY MISSILE SYSTEM

even if the human cost of casualties is ignored. Missiles can be used for indirect fire either following a laser designator operated by a forward observer, or direct control by the launch team.

The missiles themselves are designated CCLS-SM105 (Standard Missile, 105mm). They are carried in a disposable launcher/container which is fixed to the rear of the launcher and is ejected upon firing. This reduces the length and weight of the launch unit but does make the missiles themselves heavier.

Sword Worlds forces use a simple reusable rocket system, known as Kevyt Raketinheitin, which launches unguided – but cheap – 120mm projectiles designated KRA120 (from Kevyt Räjätävä Ammus, or Light Rocket Projectile, 120mm). These are officially anti-armour weapons but are routinely used against bunkers and enemy positions, and represent a brute-force method of breaching armour using a big rather than tightly focused explosion. The launcher is relatively light since missiles are carried in a disposable launch tube, bringing the total weight of the weapon and a reasonable supply of projectiles up to more than the equivalent Imperial or Zhodani system.

LOW-GRAVITY WEAPONS

Laser carbines are the standard low-G infantry weapon in use with both the Consulate and the Imperium. Imperial models are manufactured at TL12 by a variety of contractors and set up to be used as

designators for heavy weapons. An identical model is issued to forward artillery observers, serving as a designation device and also for self-defence. Laser pistols are favoured by Zhodani officers who expect low-G combat. Like their gauss pistol counterparts, an extension unit is available to turn the weapon into a carbine of sorts. Imperial officers are normally armed with the army model gauss pistol.

The role of squad support weapon is taken by heavy laser rifles in Imperial service, whilst the Zhodani use a mix of laser rifles and a heavier version of the accelerator rifle. This weapon replaces the standard grenade launcher issued to other ground formations, since lobbing a grenade in an arc is problematic in low gravity. The powered projectiles fired by the accelerator support weapon can be used for direct fire or will home in on a spot designated with the personal weapon of a squad member.

Zhodani weapons are given prosaic designations under the Consulate Central Logistics System. Since these are hard for outsiders to pronounce the Galanglic translation is given here.

In keeping with their preference for marksmanship over volume of fire, Sword Worlds forces favour full-sized laser rifles for their low-G troops. Like the other combatants, powerpack type weapons are used rather than cartridge lasers. The standard weapon is designated PE-1, for 'Personlig Energivapen', or 'personal energy weapon'.

Weapon	TL	Range	Damage	Kg	Cost	Magazine	Magazine Cost	Traits
Imperial/Darrian								
M1055A2 Laser Carbine	12	200m	4D+2	3	Cr4000	75	Cr1000	Zero-G
M1078 Heavy Laser Rifle	12	1,200m	6D	12	Cr14000	12	Cr500	Zero-G
Zhodani								
CCLS-Energy Handgun	14	40m	4D-1	1	Cr3500	150	Cr1000	Auto 2 (10), Zero-G
CCLS-Energy Infantry Weapon	14	250m	4D+4	2.5	Cr6000	90	Cr1000	Auto 2, Zero-G
CCLS-Energy Infantry Support Weapon	14	500m	6D-1	3.5	Cr9000	150	Cr1000	Zero-G
CCLS-Low Gravity Support Weapon	14	500m	4D	4	Cr3500	10	Cr50	Blast 5, Zero-G
Sword Worlds								
PE-1	10	250m	5D	5	Cr3500	100	Cr1500	Zero-G



M1055A2 LASER CARBINE



M1078 HEAVY LASER RIFLE



CCLS-ENERGY HANDGUN



CCLS-ENERGY INFANTRY WEAPON



CCLS-LOW GRAVITY SUPPORT WEAPON



PE-1

IMPERIAL MARINE WEAPONS

When aboard a starship or naval installation, marines on security duty are typically armed with snub pistols. On a combat deployment these are swapped for gauss rifles, with fusion guns at the squad support level if circumstances allow. The Fusion Gun, Human-Portable, Tech Level 15 (FGHP-15) is potent enough to deal with light vehicles but produces significant radiation when fired. Marines will be equipped with battle dress or combat armour which will protect them but nearby friendlies must be considered. Officers are issued a gauss pistol little different from the Imperial Army model, while most marines use the KG56A3M – the marine variant of the same gauss rifle issued to some army units.

Marines do carry and use cutlasses, typically during boarding actions where damage to the vessel is to be minimised. The marine model cutlass is similar to many weapons in civilian use – largely as they are copied from it – with a heavy curved cutting blade and an effective point. Marine cutlasses have a simple stirrup hilt to accommodate heavy armoured gauntlets. As with the bayonet, the cutlass is primarily a psychological weapon intended to intimidate opponents, although marines do drill for combat with the cutlass in their primary hand and a gauss pistol in the other. Few enemies are willing to get close enough to use the blade.

Weapon	TL	Range	Damage	Kg	Cost	Magazine	Magazine Cost	Traits
Cutlass (Imperial Marine Model)	15	Melee	3D	1.2	Cr200	—	—	—
KG56A3M Gauss Rifle (Imperial Marine Model)	15	750m	4D+2	3.5	Cr4000	80	Cr80	AP 5, Auto 2
FGHP-15 (Imperial Marine Model)	15	450m	2DD	12	Cr400000	—	—	Bulky, Radiation



CUTLASS [IMPERIAL MARINE MODEL]



KG56A3M GAUSS RIFLE [IMPERIAL MARINE MODEL]



FGHP-15 [IMPERIAL MARINE MODEL]

IMPERIAL ARMY PERSONAL ARMOUR

Infantry soldiers are equipped with TL12 combat armour. This is an unpowered – in the sense that movement is not servo-assisted – heavy armour suit with battlefield electronics and survival systems built in. There are some gaps to allow movement but these are covered by tough flexible material and are unlikely to be hit even by a deliberately aimed shot. The suit has an environmental protection system equivalent to a vacc suit and an electronics package that can operate seamlessly with other Imperial systems.

Some aspects of a combat armour suit can be configured, such as the degree of thermal masking provided and the camouflage pattern – if any – to be displayed on the surface of the armour. The latter is selected from a menu and set up by controlling a layer of advanced material coating the suit. Changing the pattern requires a small electrical current to be passed through the display material, which can be detected as a faint pulse in the electromagnetic spectrum.

Combat armour radiates heat at a normal level unless thermal masking is activated. This shunts waste heat into a heavily shielded container of gel with an extremely high heat capacity known as a 'chill can'. Expended cans are usually discarded but can be breached to create a crude thermal decoy. Thermal masking inflicts DM-4 on attempts to detect and track the user with thermal devices. A chill can is good for four hours of operation under normal circumstances.

Combat armour is sealed against gases and vacuum, and has a degree of self-sealing capability even if punctured. It incorporates an automatic medical unit which monitors the user's vital signs and will administer painkillers, sedatives or stimulants according to preset conditions. Normally a unit's medics are authorised to alter the presets or override them but users are not. Incidents involving self-administered combat drugs have rarely reflected well on the army so restrictions are in place in most units. The suit also has an access point for externally administered medication.

Full combat armour is not ideal for some personnel. Vehicle crews, and those unlikely to come under direct fire, instead use a combat environment suit which is light and flexible but still provides some protection from weapons as well as being sealed against gases and vacuum once the helmet is in place. The combat environment suit can be augmented with a rigid torso protector. This is short enough to allow a user to bend and sit without impediment, although most users would prefer to leave it off unless they were going into harm's way.



IMPERIAL ARMY COMBAT ARMOUR



IMPERIAL ARMY ENVIRONMENT SUIT WITH
TORSO PROTECTOR AND HELMET



ZHODANI LIGHT COMBAT ARMOUR

Armour Type	Protection	TL	Rad	Kg	Cost	Required Skill
Imperial/Darrian						
Combat Armour	+17	12	145	16	Cr88000	Vacc Suit 0
Combat Environment Suit	+8	12	20	4	Cr10000	None
Combat Environment Suit with Torso Protector and Helmet	+12	12	—	8	Cr12000	None
Zhodani						
Light Combat Armour	+15	14	100	12	Cr92000	Vacc Suit 0
Heavy Combat Armour	+21	14	160	16	Cr125000	Vacc Suit 1
Field Protection Suit	+10	14	70	6	Cr70000	None
Sword Worlds						
Combat Armour	+13	10	85	20	Cr96000	Vacc Suit 1
Jaeger Armour	+8	10	0	4	Cr2000	None

ZHODANI PERSONAL ARMOUR

The army of the Zhodani Consulate uses similar combat armour to the Imperials, although there are marked visual differences. All infantry soldiers, combat engineers and other troops likely to directly engage the enemy are issued combat armour, although the Consulate makes use of two different suits depending on the role of the soldiers using them. These are virtually identical from a few metres away, so troops using light or heavy combat armour are more readily identified by their other equipment.

Light combat armour is worn by units that need agility to perform their role, such as infantry. Heavy combat armour is used by combat engineers and some heavy weapons units. It is also issued to troops likely to engage in high-risk operations such as support gunners and snipers intending to operate in exposed positions such as high up in buildings.

Artillery and vehicle crews are issued equipment which is not designated as combat armour but which closely resembles it. Falling somewhere between a combat environment suit and armour, this suit is fully sealed once the helmet is donned and has the same life-support capabilities but is much more flexible.

SWORD WORLDS PERSONAL ARMOUR

Sword Worlds personal armour is generally similar to the Imperial equivalent but is more varied in terms of appearance and features. Contrary to what many vidshows depict, Sword Worlds armour rarely if

ever has 'space Viking' themes. It tends towards the pragmatic and functional in most cases, although some officers use elaborately decorated suits, as do certain units that consider themselves elite. This is not universal; many Sword Worlds professional soldiers consider decorated armour to be pointless frippery, beneath the dignity of a real warrior.

Vehicle crews and similar personnel are lightly protected by a flexible combat suit known as skimplövare, or 'jaeger armour'. Its exact composition varies from one world to the next but most examples are gas-proof and have reinforced areas on the torso, knees and elbows. Some direct-combat units use jaeger armour rather than combat armour, preferring the lightness and ease of movement or simply out of bravado. Most infantry soldiers wear a TL10 version of standard combat armour.

IMPERIAL BATTLE DRESS

Some Imperial Army and Marine units are equipped with TL15 battle dress. This creates a force that is vastly more powerful than conventional infantry but which can still fulfil its functions. Most troops use a standard suit constructed to TL15 standards, with a full combat electronics suite and life support system. Its fuel cells are good for around 12 hours of operation, or longer if activity is minimised. No weaponry is built into Imperial battle dress as standard but users are issued a gauss pistol for emergency self-defence. Deepening on the mission, armoured troopers might use gauss rifles or fusion guns as personal weapons.



ZHODANI HEAVY COMBAT ARMOUR



ZHODANI FIELD PROTECTION SUIT



SWORD WORLDS COMBAT ARMOUR



SWORD WORLDS JAEGER ARMOUR

In an attempt to keep costs merely astronomical, Imperial forces use only three variants of battle dress. In addition to the standard infantry suit, command suits are used by both army and marine officers, and assault battle dress is issued to units trained for meteoric assault operations. Small numbers of other variant suits are in operation with specialist units and a variety of accessories can be carried to customise the suit. Details of these can be found on page 44 of *Central Supply Catalogue*. The number of accessories a suit can carry is noted under 'slots'.

Battle dress is not only phenomenally expensive to purchase; it imposes an enormous logistics burden on the operators. Army battle dress units have their own mobile support facility carried in several grav APCs, enabling suits to be maintained and repaired in the field. The Marine Corps has some of these but generally uses permanent facilities installed in supporting starships, with only a small field support capability.



IMPERIAL INFANTRY BATTLE DRESS



IMPERIAL COMMAND BATTLE DRESS



IMPERIAL ASSAULT BATTLE DRESS

Armour Type	Protection	TL	Rad	STR	DEX	Slots	Kg	Cost	Required Skill
Imperial/Darrian									
Infantry Battle Dress	+28	15	320	+6	+4	18	100	Cr440000	Vacc Suit 1
Command Battle Dress	+30	15	340	+6	+4	20	110	Cr700000	Vacc Suit 1
Assault Battle Dress	+31	15	330	+6	+4	22	140	Cr660000	Vacc Suit 1
Zhodani									
Battle Dress	+25	14	290	+6	+4	16	100	Cr220000	Vacc Suit 1
Psi-Enhanced Battle Dress	+25 (+1/2 PSI)	14	290	+6	+4	16	100	Cr880000	Vacc Suit 1
Teleport-Enabled Battle Dress	+22 (+1/2 PSI)	14	260	+6	+4	16	90	MCr2	Vacc Suit 1



ZHODANI BATTLE DRESS



ZHODANI PSI-ENHANCED BATTLE DRESS



ZHODANI TELEPORT-ENABLED BATTLE DRESS

ZHODANI BATTLE DRESS

Battle dress is used by some elite assault formations and other specialist units, including teleport-capable commandos. Like combat armour, it follows a distinctively Zhodani design but that used by most formations is functionally similar to the Imperial version. One exception is the armour of teleport-capable units, which incorporates exotic materials to guide the user's mental signals evenly through their armour and equipment. Teleportation is possible without this feature but the probability of mishaps is higher.

More lightly equipped teleporters do not suffer from this problem but the bulk of a powered armour suit poses problems. Mishaps normally take the form of disruption to the suit, possibly damaging it or causing temporary power or control loss. This leaves commandos vulnerable in the moments after arrival, prompting the development of the teleport-capable battle dress. All suits issued to teleport units are psi-enhanced and some elite units receive psi-enhanced suits without the teleport feature.

SUPPORT AND VEHICULAR WEAPONS

The primary role of support weapons is to assist infantry from close by. They are also used to arm light vehicles and protect heavier ones from infantry attack. Typically a support weapon will be available in several configurations – a vehicle mounted variant, an emplaced variant and possibly a lighter infantry-mobile version. Vehicular weapons are considered to include all heavy direct-fire systems such as mass driver cannon, plasma and fusion guns, as well as large lasers. Indirect-fire weapons and those intended mainly for aerospace defence are listed separately.

VRF GAUSS GUNS

The standard vehicle-mounted direct-fire support weapon in Imperial service is the DSW-4, known unofficially as the 'Ripper'. This weapon fires the same 4mm darts as the Imperial Army and Marines

gauss rifle. It is fed from a high-capacity ammunition hopper and normally mounted in a small turret atop an armoured vehicle. A ground-mount version is available, with a heavy base plate and traverse mechanism. It is normally operated remotely and can be preset to automatically engage targets meeting certain parameters.

The Zhodani version is chambered for the same 4.8mm dart used in infantry rifles. It is functionally similar to the Imperial weapon and it has been alleged that it was a direct copy although there is no evidence of this. Penetration of the heavier darts is marginally better than that of the Imperial weapon. As the only direct fire infantry support weapon in use, the VRF gauss gun is simply known by this designation in Zhodani service.

IMPERIAL ARMY ISW-150 VEHICLE-MOUNTED MORTAR SYSTEM

The Imperial Army does not make use of infantry-carried light mortars for battlefield work, largely due to the availability of heavier weapons and large numbers of vehicles. Nevertheless, the mortar remains an effective weapon system in the modern battlespace. Its high arc of fire allows targets to be engaged from behind cover and the weapons themselves to be mounted in almost any vehicle. Dropping a bomb onto the top of a target is often more effective than firing at its most effective protection.

Against mid-tech forces, a laser-designated mortar projectile is a highly effective killer of armoured vehicles. Higher-tech forces can block lasers or evade projectiles but even then a hail of mortar bombs is effective against defensive positions. The standard support mortar is designated ISW-150, chambered for a 150mm projectile which can be loaded singly at need. More commonly a six-chambered 'revolver' magazine is pre-loaded and rotates its projectile into the firing position in turn. A revolver-mortar can deliver six projectiles in around seven seconds and can be set to fire a burst of one to six at a time. These can be put onto slightly different ballistic paths to create a time-on-target salvo.

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Imperial/Darrian								
DSW-4 'Ripper'	12	0.75	4D	0.25	Cr20000	400	Cr1000	AP 5, Auto 8
Zhodani								
CCLS-Direct Fire Support Weapon	14	0.8	4D	0.25	Cr26000	400	Cr1000	AP 6, Auto 8

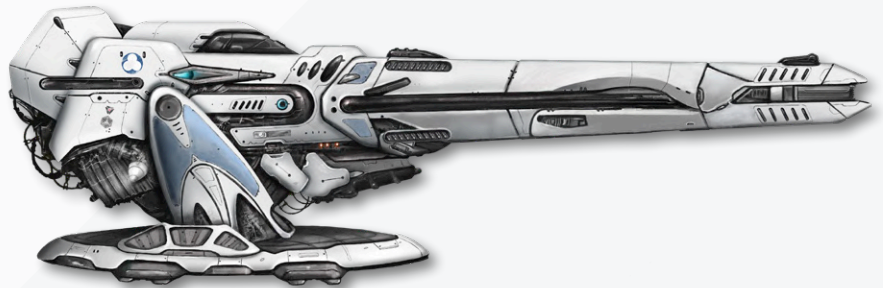
A pair of company-level support vehicles can deliver 12 projectiles almost simultaneously before retiring to reload. The revolver magazine can be refilled in place or dropped free and another inserted in the space of seconds. Range is relatively short for an artillery weapon, at eight kilometres, but this mortar is intended for close support of infantry within a company or battalion rather than long-range bombardment. An extended-range rocket-assisted projectile with a range of 15 kilometres is available but not widely issued. All projectiles are capable of receiving external guidance signals or using inertial guidance, and of selecting a suitable target autonomously if given clearance to do so by the operator.

Standard ammunition is High-Explosive Dual-Purpose (HEDP) which is intended for use against personnel and light structures. A guided anti-armour projectile is carried in small quantities for dealing with relatively light armoured vehicles and bunkers. Obscurant warheads are also available.

The Zhodani Consulate deploys a battlefield rocket system for a similar role. Designated CCLS-Short Range Battlefield Support System, the weapon consists of five rows of five launch rails, each carrying a 100mm rocket. Warheads are usually HEDP but plasma, obscurant and anti-armour loads are possible. Rails are often built into wells in a vehicle for vertical launch and less



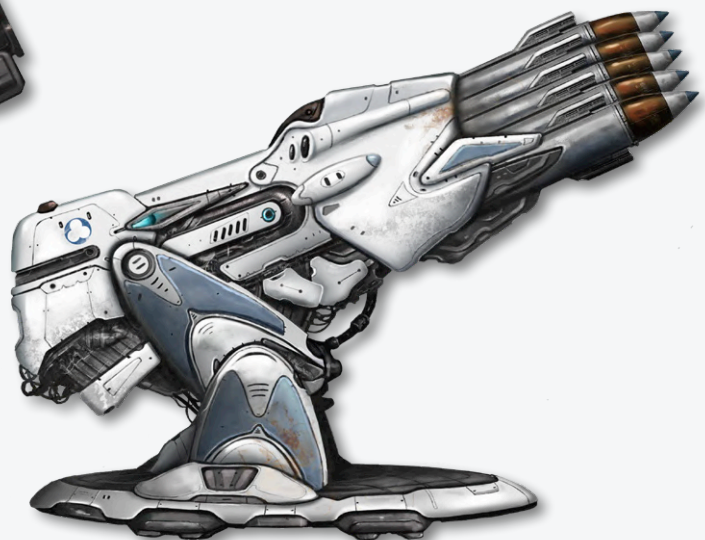
DSW-4 'RIPPER'



CCLS-DIRECT FIRE SUPPORT WEAPON



ISW-150 MORTAR SYSTEM



CCLS-SHORT RANGE BATTLEFIELD SUPPORT SYSTEM

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Imperial/Darrian								
ISW-150 Support Mortar (HEDP)	12	8	9D	1.5	Cr125000	6	Cr5000	Artillery, Blast 10, Smart
ISW-150 (Extended Range HEDP)	12	15	8D	1.5	Cr125000	6	Cr12000	Artillery, Blast 10, Smart
ISW-150 (Anti-Armour)	12	8	6D	1.5	Cr125000	6	Cr7500	AP 20, Artillery, Blast 6, Smart
ISW-150 (Obscurant)	12	8	—	1.5	Cr125000	6	Cr3000	Artillery, Blast 10, Smart
Zhodani								
CCLS-Short Range Battlefield Support System	14	4	As Missile	2	Cr25000	25	As Missiles	—
CCLS-Short Range Battlefield Support System (HEDP)	14	4	8D	—	Cr5000	—	—	Artillery, Blast 8, One-Use, Smart
CCLS-Short Range Battlefield Support System (Plasma)	14	4	1DD	—	Cr25000	—	—	AP10, Artillery, Blast 10, One-Use, Smart
CCLS-Short Range Battlefield Support System (Obscurant)	14	4	—	—	Cr3000	—	—	Artillery, Blast 12, One-Use, Smart
CCLS-Short Range Battlefield Support System (Anti-Armour)	14	4	—	—	Cr10000	—	—	Artillery, Blast 10, One-Use, Smart

commonly set up on a trainable mount. The rockets are laser-guided, usually by a designator mounted on a small drone or carried by an infantry soldier. They have a practical minimum range of 100 metres but could in theory be sent straight up and down again. More commonly they are launched in a high arc not unlike that used by a mortar, in order to drop onto the top of targets.

VEHICLE-MOUNTED PROJECTILE WEAPONS

The DFW-58 series of gauss cannon arms a number of Imperial Army vehicles including light tanks and some tank destroyers. Examples are also sometimes encountered in fixed emplacements protecting important facilities, although most of these are in planetary army hands. The 58mm projectile represents the largest-calibre gauss weapon in Imperial service and is capable of penetrating most armoured vehicles from the side or rear. It is ineffective or only marginally

effective against main battle tanks but this weapon was never intended to go toe-to-toe with fusion gun-armed MBTs. It is a potent killer of mid-tech to early starfaring era vehicles – the Imperial Army's most likely enemies.

Weapons of this sort are most commonly mounted in a large turret and protected by armour. They may sometimes be fitted to a limited-traverse mount aboard a grav gunship acting as a tank destroyer, or in an unprotected gun-over-hull configuration which saves a lot of weight but leaves the cannon vulnerable to relatively light weapons. The high velocity of the projectile is sufficient to destroy most targets by kinetic energy, overpressure inside a penetrated vehicle, or secondary explosions as nearby materials are flashed to vapour.

The Zhodani equivalent to the Imperial heavy gauss cannon is a weapon designated CCLS-High Velocity Mass Driver Cannon. It is used aboard some armoured combat vehicles and also as an aerospace defence weapon either in vehicle mounts or emplaced. The weapon has a range of 40 kilometres in direct fire,

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Imperial/Darrian								
DFW-58A2 Heavy Gauss Cannon	12	3	2DD	2	Cr225000	60	Cr800	AP 15, Auto 2
Zhodani								
CCLS-High Velocity Mass Driver Cannon	14	40 (4)	2DD	4	Cr400000	50	Cr1000	AP 20



DFW-58A2 HEAVY GAUSS CANNON



CCLS-HIGH VELOCITY MASS DRIVER CANNON

although this is only useful when firing at targets above the ground. Gravity has little time to affect the extremely fast projectiles so planetary curvature gives the hypervelocity cannon a practical range of about four kilometres at ground level. Grav vehicles that fly unwisely high may fall victim to these weapons.

ARTILLERY ROCKET SYSTEMS

Although the heavy mortars mounted on some vehicles can be considered artillery in many ways, Imperial doctrine considers them support weapons rather than artillery proper. Three systems are used by artillery units – mass driver guns, rocket systems and meson weapons. In each case, the weapon is made to an Imperial specification by various manufacturers and serves under a broad designation that does not indicate the specific model. One artillery unit might be using the industry standard Instellarms RS1704 ‘Hellblazer’ rocket system and another the ‘Star Captain’ system manufactured under license by other corporations.

Both of these, and other systems, serve under army designation IBW(R)-285. They are to all intents and purposes identical in function, with complete component interchangeability as required by the army specification. However, there will be slight variations in layout and performance, leading to debate about which is better or more cost-effective. This slight variation is inevitable given the size of the Imperial Army and the number of weapons it requires. So long as variation does not impose a logistics problem or require additional training time it is tolerable.

The standard Imperial Army rocket system designation IBW(R)-285 stands for Indirect-Fire Bombardment Weapon, 285mm. The launch unit consists of a battery of tubes in three rows of six. Rockets can be launched singly or in a salvo of any number in rapid succession. Reloading can be accomplished manually if absolutely necessary, although this takes a considerable period and is exhausting. More commonly a second vehicle carrying a reloading mechanism transfers up to 18 projectiles simultaneously.

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
IBW(R)-285 Rocket System	12	—	—	16	Cr250000	18	As Missile	—
Punisher Bombardment Rocket	12	50	1DD	—	Cr45000	—	—	AP 25, Artillery, Blast 20, One-Use
R-Seeker Anti-Radiation Missile	12	65	8D	—	Cr75000	—	—	AP 25, Artillery, Blast 20, One-Use, Smart

Although the term ‘rocket’ implies an unguided projectile the ‘Punisher’ rockets used by the IBW(R)-285 system do have basic guidance. This is a passive system, relying on inertial guidance and signals received from other elements of the battlespace network, preventing the target from picking up active homing signals and deploying countermeasures. Guidance is sufficient to hit a general target area but not specific vehicles or structures within it. The standard Punisher rocket uses a high explosive warhead, saturating the target area with imprecise but potent explosive force.

More expensive guided weapons can be launched from the same system. Most commonly this is the ‘R-Seeker’ anti-radiation missile, which has a smaller warhead but can deploy wings to loiter in the target area until it detects emissions from radar or communications equipment.



IBW(R)-285 ROCKET SYSTEM

ARTILLERY MASS DRIVERS

The mass driver guns used throughout the Imperial Army and in many planetary armed forces use a standardised electromagnetic propulsion/acceleration unit. Launch of a projectile is ‘cold’ in the sense that there is no noise or smoke, but there is considerable heating and an electromagnetic spike which will reveal the weapon to anyone with suitable sensors.

Barrel lengths are standardised as ‘howitzer’, ‘gun-howitzer’ and ‘gun’ (or ‘cannon’), with length relative to the calibre of the weapon. Only two calibres of mass driver are used; the 150mm field mass driver and the 250mm heavy mass driver. Howitzer-length weapons have the advantage of being relatively light and easy to transport. Their range is not as great as longer guns and they are virtually useless in direct fire. Mass driver howitzers are rare in Imperial service as their role is filled by vehicle-mounted mortars. They are used by some planetary armed forces.

Gun howitzers are the standard Imperial mass driver weapon, with a barrel length of 5.5 metres. Whilst not capable of firing in such a high arc as a howitzer or mortar these weapons have a higher muzzle velocity and therefore greater range. The standard Imperial gun howitzer uses a three-chambered rotary magazine which is autoloading from stowed ammunition, although this cannot be done while the gun is elevated. It is standard practice to fire a burst of three shells – in under two seconds – then reload while the vehicle is relocating to avoid return fire. These weapons can also engage in direct-fire mode, which is highly effective against mid-tech opponents.

Mass driver guns are not common in Imperial service. They are considered too unwieldy given the long barrel relative to the size of an artillery grav sled, although some planetary armed forces use them to fire sub-calibre discarding sabot rounds aboard tank destroyers. Heavy mass drivers are used in some heavy artillery formations, launching a 250mm calibre shell from a

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Imperial/Darrian								
150mm Mass Driver Howitzer	12	25	1DD	4.5	Cr400000	3	Cr2500	Artillery, Blast 10
IBS(T)-150 150mm Mass Driver Gun Howitzer	12	40	1DD	7	Cr500000	3	Cr2500	Artillery, Blast 10
150mm Mass Driver Cannon (Gun)	12	60	1DD	10	Cr600000	3	Cr2500	Artillery, Blast 10
150mm Mass Driver Cannon (Gun) Discarding Sabot Ammunition	12	3	1DD	10	Cr600000	3	Cr3500	AP 25
250mm Heavy Mass Driver Gun	12	75	2DD	25	MCr1.25	3	Cr7000	Artillery, Blast 20
Zhodani								
CCLS-Light Mass Driver Howitzer (110mm)	14	20	1DD	1.5	Cr100000	50	Cr500	Artillery, Blast 8
CCLS-Heavy Mass Driver Howitzer	14	30	3DD	40	MCr2	10	Cr50000	Artillery, Blast 40



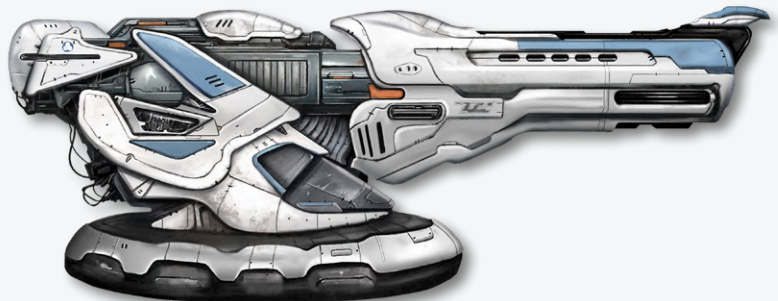
150MM MASS DRIVER HOWITZER



CCLS-LIGHT MASS DRIVER HOWITZER



250MM HEAVY MASS DRIVER GUN



CCLS-HEAVY MASS DRIVER HOWITZER

14-metre barrel, and have applications as planetary defence weapons. This role also requires a sub-calibre shell configured to penetrate armour rather than carry a large explosive warhead.

The howitzer variant is deployed under a variety of designations by planetary armed forces, who might also have different names for the gun-howitzer if they use it. In Imperial service this weapon is designated IBS(T)-150. Similarly, the long-barrelled 150mm and 250mm mass driver guns are usually known by a variety of local designations.

The Zhodani armed forces make use of two mass driver howitzer designs. The first is a light 110mm field piece whose short barrel makes it suitable for use aboard relatively small vehicles. The standard mounting is a lightly armoured turret which can traverse quickly enough to engage moving targets or make more or less direct fire attacks. Howitzers of this kind are used by light mobile artillery formations, firing guided shells at targets spotted by units closer to the enemy.

The second howitzer is quite the opposite. It is a 300mm calibre heavy siege weapon designed to drop large plasma shells onto a target such as the fortifications protecting a city. It is typically housed in a limited-traverse mount aboard a grav vehicle that can easily align itself in the general direction of the target. The howitzer barrel projects only a little above the armoured top surface of the vehicle. This weapon has no direct fire capability.

BATTLEFIELD ENERGY WEAPONS

Imperial forces make use of three general types of energy weapons: laser, plasma and meson. The first two are directed-energy weapons and useful only in direct fire, whilst meson weapons are an exotic technology with its own special capabilities.

Laser weapons use a beam of tightly focused photons to deliver energy to the target. Time from firing to hitting is infinitesimally small since the photons move at lightspeed but laser beams and pulses are attenuated or scattered by atmospheric effects and will dump all their energy into the first thing they hit. For example, shooting at a target obscured by leaves and foliage will devastate what is hit, but until the leaf cover is completely burned away the laser beam is blocked. The inevitable smoke and dust of a combat zone can render lasers ineffective for inflicting damage, although an attenuated rangefinder or designation beam may still perform its intended function.

Lasers are for the most part used as aerospace defence weapons or in short-range applications such as missile defence systems where there is little beam attenuation. They are also popular on vehicles intended to fight on airless worlds. Large aerospace defence lasers are typically emplaced around installations, on high-angle mounts, or sometimes aboard large vehicles. Even then, they are far more common in planetary defence applications than with the Imperial Army. Laser cannons used aboard Imperial Army vehicles are discussed under aerospace defence weapons (page 72).

Plasma type weapons include fusion guns, in which the plasma is contained longer and at a higher energy state before firing, actually proceeding to nuclear fusion after release. This creates the characteristic 'fusion lag' between commanding the gun to fire and it actually doing so. The slight delay is officially termed 'lock time' in reference to a similar delay encountered in archaic firearms but has a variety of expletive-laden euphemisms among those likely to be on one end or the other of the weapon.

Fusion guns deliver incredible firepower but are energy-hungry and require a great deal of maintenance in order to keep their electromagnetic containment and direction fields at the required levels. The result is a blast of fusing plasma capable of incinerating a main battle tank but which causes a burst of hard radiation. For this reason fusion guns are only encountered on heavy armoured vehicles such as grav tanks or gunships which never operate around unarmoured infantry.

The fusion guns used aboard Imperial vehicles are TL15 weapons designated fusion gun-Z. This has no association with 'Zhodani' but is a reference to the X,Y,Z designations given to earlier models. Vehicle mounted fusion guns have a minimum size and quickly display diminishing returns with size – at least until starship-grade weapons become available – so the military fusion gun has not changed in size since the TL13 fusion gun-X was introduced. What has increased is blast radius around the impact point, penetration and the amount of radiation emitted. Planetary armed forces might use TL13–14 weapons instead.

Battlefield meson guns are considered to be artillery weapons. They are far too large to be carried as vehicle armament for direct combat and are used in a very different manner to other weapon systems. A meson weapon is not a 'gun' in the usual sense and indeed does not have anything to do with mesons. It is unclear why the name was applied but there are those who think it was a cover name used during the Interstellar

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Fusion Gun-Z	15	10	3DD	4	MCr8	—	—	AP30, Blast 30, Radiation
Annihilator Meson Accelerator	15	150	4DD	60	MCr20	—	—	AP (infinite), Radiation
Fusion Gun-Y	14	5	3DD	4	MCr3	—	—	AP 20, Blast 20, Radiation



FUSION GUN-Z



CCLS-BATTLEFIELD FUSION WEAPON



ANNIHILATOR MESON ACCELERATOR

Wars era by the Solomani inventors of the weapon, in much the same manner that the mysterious lozenge-shaped objects moving aboard railway wagons were explained as being ‘water tanks’.

A meson weapon projects a pulse of relativistic particles which can pass through matter and which liberate enormous energy when they decay. Placing the decay point is complex and requires accurate targeting data but a sufficiently accurate ‘shot’ causes the decay point to be inside the target, thereby negating any and all armour protection it might have. The particle stream passes through any intervening matter, enabling what has been called the ‘directs of all direct fire’ – right through intervening terrain and other obstacles.

The Imperial Army designates its battlefield meson guns as the Annihilator weapon system, which is reasonable enough given the potency of the particle stream. Annihilators are operated by specialist heavy artillery formations, with the weapon’s 60 tons increased even more by the need for multiple power supply vehicles.

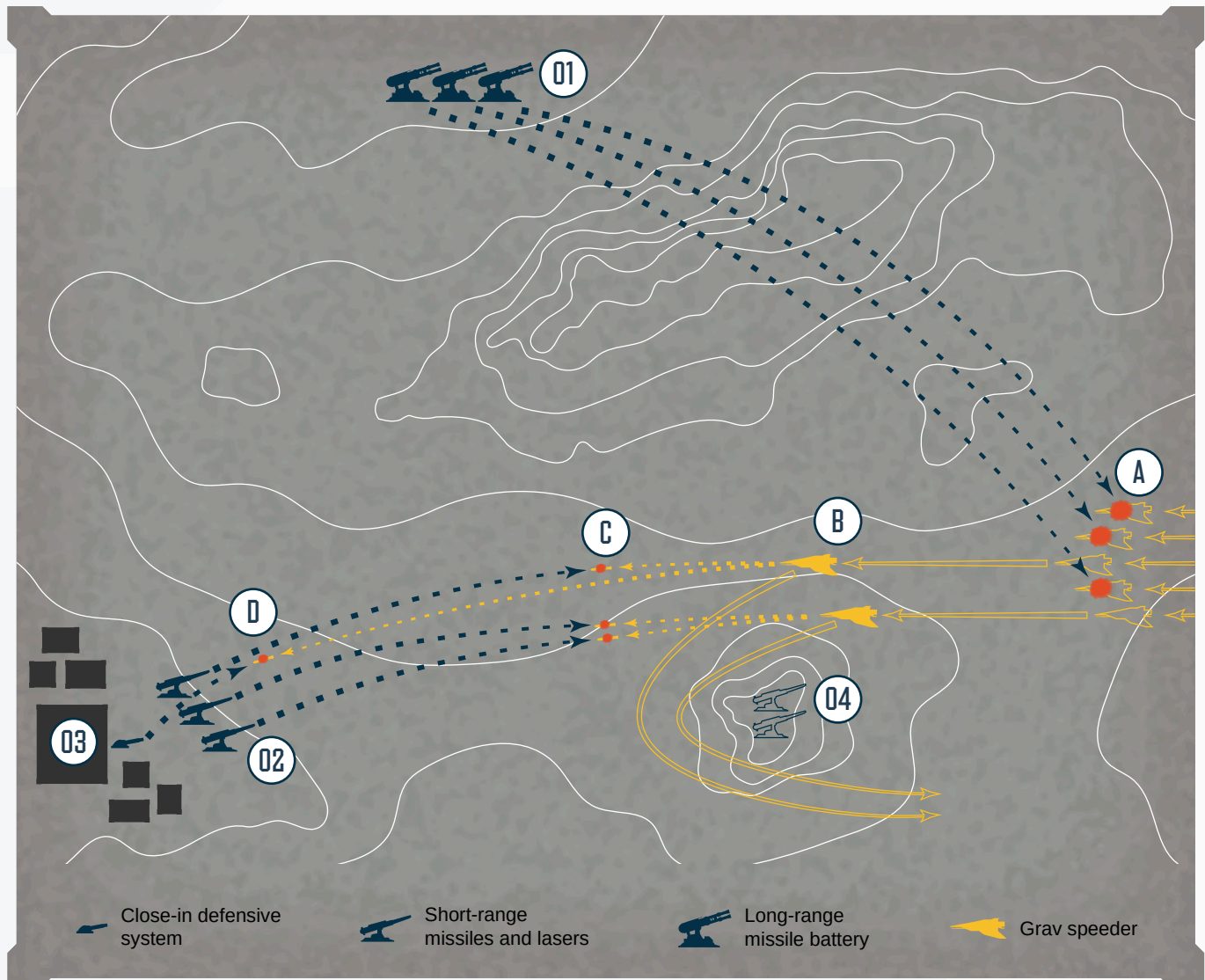
The Zhodani Consulate does not have widespread access to battlefield meson weapons, although some experimental or captured examples may have been deployed. The primary armament for main battle tanks is a TL14 fusion gun equivalent to the Imperial Fusion Gun-Y, designated CCLS-Battlefield Fusion Weapon. Lasers are used for much the same purposes as in the Imperial Army and are rarely encountered as the main weapon of a direct-combat vehicle.

AEROSPACE DEFENCE WEAPONS

Each type of aerospace defence weapon has its strengths and weaknesses. A theatre defence missile battery might be able to damage ships in orbit but is unlikely to be able to intercept low-flying small grav craft. Relying on a single weapon type has repeatedly been demonstrated to be a path to defeat, so aerospace defence is built in layers. Troops on the ground are protected from grand threats by a distant theatre defence system while the area defence formation 20 kilometres away intercepts enemy grav craft and flying vehicles. Point defence is provided by short-range missiles from vehicles in the formation, and any 'leakers' that get through can be engaged with the troops' missile launchers or even small arms. This layered system can deal with any threat from ballistic missiles to small suicide drones, although it can be saturated by a sufficiently concentrated attack.

Area defence is provided by a long-range missile battery (1), which launches on a high trajectory to clear intervening terrain. This requires integration with a sensor network to provide targeting information. A point defence unit with a mix of short-range missiles and lasers (2) is positioned close to the expected target (3), on the likely 'threat axis'. If additional point defences were available these could be positioned forward (4) such that an incoming strike would pass through their engagement envelope.

The strike force is thinned by area defences (A) but some craft survive to reach launching range for their own weapons (B). Their missiles are mostly shot down by point defences (C) with a lone 'leaker' getting close enough to be engaged by the target's close-in defensive system (D).



Weapon	TL	Range	Damage	Spaces	Cost	Magazine	Magazine Cost	Traits
Rotella/CCLS-Close-Range Aerospace Defence System	13	1	3D	2	Cr500000	—	—	Auto 4

CLOSE-IN DEFENCE

Aerospace defence weapons specialise in engaging targets within a certain range of sizes and behaviours. A weapon capable of intercepting a grav attack speeder might not be able to hit a small target like a suicide drone and would be far too expensive to provide a cost-effective counter to such small, cheap threats.

Close-In Defence Weapons (CIWS) are designed to deal with threats on their final approach to the target. Examples include the anti-missile gatling laser mounts carried aboard many Imperial Army vehicles. These weapons have a range of at most a few hundred metres but this is often enough to create some overlap for mutual protection. CIWS systems can engage small, fast-moving targets and can be manually directed to fire at other targets such as enemy personnel.

Predictably perhaps, the standard Imperial CIWS system is named after a shield. In this case the designation is Rotella, after a small round shield used on Old Terra. The Zhodani equivalent is more or less identical.

POINT DEFENCE

Point defence is, as the name suggests, the protection of a particular location. This will typically be a group of vehicles or an installation. Point defence weapons include fast, short-ranged missiles, lasers or projectile weapons on a fast-slewing mount. They typically have an effective range of a kilometre or two and may be multirole systems capable of engaging other targets when not in aerospace defence mode.

Two standard Imperial anti-aerospace point defence weapon systems exist. The first, designated Bright Lance, is a laser, equivalent in many ways to a light laser cannon, mounted in a large high-angle turret. So long as there is a sufficient source of energy, such weapons are essentially free to use and eminently suitable for knocking down small, cheap targets such as drones whilst remaining highly capable against tougher threats. Vehicles equipped with this system do not have the usual VRF gauss gun as the laser provides sufficient self-defence capability.

Typically one of the three vehicles in a firing element will have a laser armament, along with about half of command vehicles. Large aerospace defence lasers are too bulky to be carried on an APC chassis and tend to be either emplaced in static positions or carried in specialist vehicles. These are still considered to be point defence weapons as their area of coverage is limited to line of sight.

The second weapon system is more common in light aerospace defence formations. It consists of a TL12 light gatling laser not dissimilar to a scaled-up version of the laser anti-missile system which protects most Imperial Army combat vehicles and is designated Bright Javelin. The laser is mounted in an open gun-over-hull configuration, unprotected by armour and flanked on each side by a pair of tubes for light aerospace defence missiles. The whole system retracts for autoloading, which does briefly take the laser out of commission. This is considered a minor drawback, as is the intense heat generated by firing the laser. The weapon system as a whole is known by the designation Pelta, predictably after another ancient Terran shield, and is only designated Bright Javelin when supplied without the missile launch system.

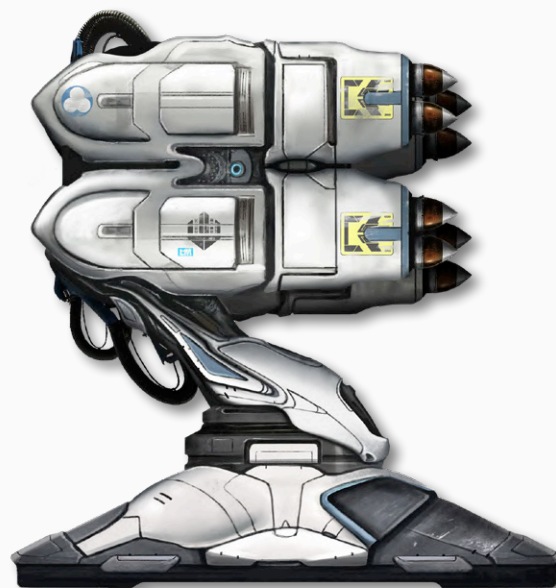
The missiles themselves are standard TL12 light anti-aerospace weapons designated 'Firefly' in Imperial service. These are manufactured in their millions by contractors all across the Imperium. They have a relatively short range but are fast and agile. Coupled with the ability to train the launcher, this gives a very short reaction time – so short that many vehicle commanders prefer to engage with missiles rather than using the rather more obvious laser.

The Zhodani Consulate uses a similar medium-range missile – designated CCLS-Multipurpose Battlefield Missile – in trainable quad-mount launchers and also in vertical-launch canisters which can be attached to a range of vehicles. The missile, like its infantry-launched smaller counterpart, has a multimode warhead and can be used against armoured vehicles or aerospace threats.

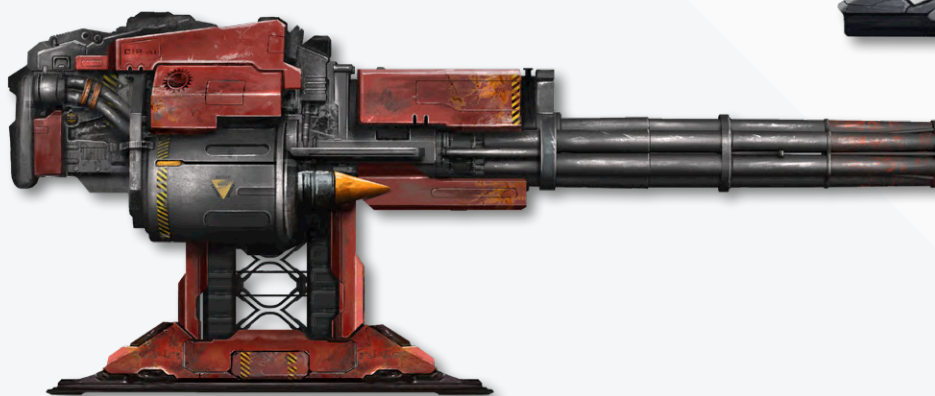
Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Imperial/Darrian								
Bright Lance	12	10	8D	3	Cr60000	—	—	AP 5
Bright Javelin	12	3	4D	1	Cr400000	—	—	Auto 4
Pelta (w/ Bright Javelin 4-tube Firefly)	12	—	—	1.5	Cr425000	4 (Missiles)	As Missiles	—
Firefly Missile	12	12	8D	—	Cr20000	—	—	One-Use, Smart
Zhodani								
CCLS-Multipurpose Battlefield Missile	14	22	7D	—	Cr75000	—	—	One-Use, Smart
Quad Mount	14	—	—	1	Cr25000	4	As Missiles	—
Single Container-Launcher	14	—	—	0.25	Cr90000 (loaded)	1	—	One-Use



BRIGHT LANCE



QUAD MOUNT



PELTA

AREA DEFENCE

Area Defence weapons cover a greater volume of aerospace, being capable of engaging high-flying and relatively distant targets. Almost all such weapons are missiles, enabling an over-the-horizon intercept if suitable targeting data is available. Area defence weapons tend to have larger warheads intended to deal with larger targets than point defence systems, but since this translates to a less manoeuvrable missile, engagement of small, fast targets can be problematic. Range is usually in tens of kilometres.

The standard Imperial area defence weapon is the Shaamdikur missile, named for an avian predator common to several worlds in what used to be the Vilani Imperium. Shaamdikur can be launched from an open trainable rail mount or vertically from a disposable container-launcher. This variant is designated

Shaamdikur-V and is normally deployed as a block of four container-launchers mounted vertically. Reloading is accomplished by removing the empty container and lowering another into its place. Container-launchers can be positioned on a field mount or sunk into a structure to provide one-shot area defence. The standard version of the Shaamdikur missile system carries two missiles on a trainable open rail mount and will normally be accompanied by a reloader vehicle which carries multiple spare missiles.

The Zhodani Consulate uses a larger and more powerful missile than Shaamdikur, as usual with a multimode warhead. This enables units equipped with it to act as artillery or aerospace defence but this requires careful management in order to avoid reducing aerospace defence capability. The missile is designated CCLS-Intermediate Range Missile and is carried singly on a rail launcher.

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Imperial/Darrian								
Shaamdikur Missile	12	60	1DD	1	Cr50000	—	—	One-Use, Smart
Shaamdikur Twin Rail	12	—	—	2	Cr7500 (Unloaded)	2	As Missile	—
Shaamdikur-V (Single Container-Launcher)	12	—	—	1	Cr55000 (Loaded)	—	As Missile	—
Zhodani								
CCLS-Intermediate Range Missile	14	150	1DD	2	Cr100000	—	—	AP 15, Blast 5, One-Use, Smart
Intermediate Range Missile Launcher	14	—	—	1	Cr30000	1	As Missile	—



SHAAMDIKUR TWIN RAIL



INTERMEDIATE RANGE MISSILE LAUNCHER

THEATRE DEFENCE

Theatre defence weapons are intended to protect a wide area from major threats such as ballistic missiles or vessels in low orbit. Most weapons are missiles and may be mounted aboard large vehicles or set up in static emplacements. Range is typically in the low hundreds of kilometres.

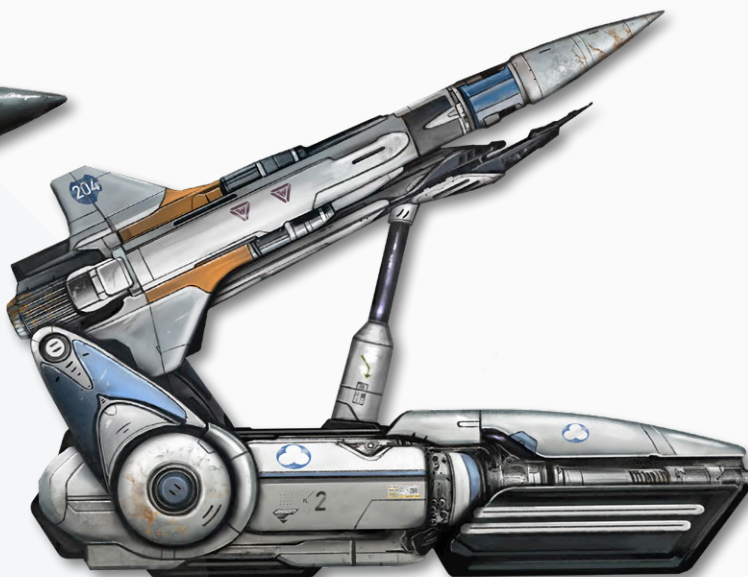
The standard Imperial theatre defence missile is designated Kamlir. It is carried singly on an erector-launcher, with a reloading vehicle in close proximity. It is standard practice for that vehicle to mount a point defence weapon for the protection of the launcher unit. Theatre defence formations are normally independent battalions which are attached to a division or corps as necessary.

The Zhodani equivalent is a heavy missile system capable of launching either a theatre defence weapon or one capable of reaching orbit. It therefore falls between the theatre and planetary defence categories. The same erector-launcher is used for both weapons, with the theatre defence version carrying five submunitions which can make separate intercepts. This version is designated CCLS-Theatre Defence Missile whilst the orbital variant, which carries a large focused plasma warhead, is designated CCLS Orbital Defence Missile.

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Imperial/Darrian								
Kamlir Missile	12	400	1DD	4	Cr250000	—	—	One-Use, Smart
Kamlir Erector-Launcher	12	—	—	2	Cr50000 (Unloaded)	1	As Missile	—
Zhodani								
CCLS-Theatre Defence Missile	14	300	1DD (x5)	2	Cr300000	—	—	One-Use, Smart
CCLS-Orbital Defence Missile	14	300	4DD	2	Cr500000	—	—	AP 40, One-Use, Smart
CCLS-Heavy Launch System	14	—	—	8	Cr400000	1	As Missile	—



KAMLIR ERECTOR-LAUNCHER



CCLS-HEAVY LAUNCH SYSTEM

PLANETARY DEFENCE

Planetary defence weapon systems are intended to protect against threats coming down from orbit or to attack vessels in orbit. Large Planetary Aerospace Defence (PAD) missiles may be used, along with meson guns and heavy laser cannon. Planetary defence systems vary more in potency than other types, although they all have long range. The very largest are built into heavily protected underground bunkers, while lighter mobile planetary defence weapons might accompany a field army to protect its most vital elements from orbital attack.

The Imperial Annihilator battlefield meson gun can be used to attack targets in orbit, although vehicles are vulnerable to weapons launched by orbital craft. Where there has been time to build proper planetary defence installations these will be a mix of large fortifications mounting starship-grade weapons and smaller bunkers equipped with Annihilators. Meson gun sites are usually concealed underground, in which case they will be within the defensive envelope of an aerospace defence installation but not usually directly beneath it.



THE UNIFIED ARMIES OF THE IMPERIUM

The Third Imperium has a great deal of history and has connections with earlier states, as well as influences of the many cultures absorbed over the centuries. Its military is set up to permit contributions from member worlds and organisations, although its main fighting forces all conform to a standard model. The force overall is known as the Unified Armies of the Imperium, and is subdivided into three commands: Ground Force Command (GFC), Nautical Force Command (NFC) and Close Orbit and Aerospace Control Command (COACC). In addition, the Imperial Marine Corps is sometimes involved with ground operations.

As might be expected, Nautical Force Command is by far the smallest of these subdivisions and also the one with the highest percentage of specialist and non-human units. It does operate maritime ('wet navy') vessels but most maritime operations are either in swampy coastal terrain or deep underwater. Close Orbit and Aerospace Control Command is much larger. It is tasked with protecting planetary installations and forces from attack, and with establishing aerospace superiority during a planetside campaign. Ground Force Command actually operates on and above the planetary surface, making extensive use of grav vehicles, and can project power out to sea without undue difficulty.

The Unified Armies answer to the Emperor through the Lord Marshal of the Unified Armies. This is a political post, although its holder is also the Grand Marshal of Core Sector which is in theory a command position. Each subsector is assigned a Vice Marshal who oversees all army activity in a subsector. The marshals are planners and strategists rather than field commanders, and are assisted by a large staff.

Fighting forces are deployed as brigades, divisions and corps, making up entire armies in some cases. Some critical worlds may have multiple armies, all operating under the command of a field marshal. In this case, armies may be assigned geographically or by speciality. For example, a strategically important world with three major continents might have a ground force command army assigned to each of them, plus an aerospace army responsible for the overall defence of the world and a fifth army made up of a mix of maritime and ground force units, responsible for the world's oceans and islands. Another world might have only a composite brigade deployed to it, or no Imperial Army forces at all.



THE REGIMENTAL SYSTEM

Recruitment and administration of units for the Imperial Army follows what is called the regimental system. A regiment is an administrative formation which is highly unlikely to deploy en masse as a fighting force. One reason for this is that the regiment might not have the right force mix for the task at hand. It is also possible that a spectacular disaster might result in the loss of an entire regiment with traditions going back 1,000 years. This cannot happen if the constituent parts of the regiment are deployed in different areas.

Most regiments are associated with a particular world and by preference their personnel are recruited there or from others close by. This does not mean the regiment is 'owned' by that world; it is an Imperial Army asset to be deployed wherever the Emperor and his marshals think best. The process is relatively simple; a world government requests the honour – or is informed it has been honoured – to raise a regiment for service in the Imperial Army. Funding is provided by the Imperial Army for training and equipment, and advisors are sent to assist in the founding of the new force. In the case where a world already has an associated regiment there will be an ongoing training programme to ensure replacement personnel are available so the advisors will not be needed.

A regiment will usually be of a single troop type, most commonly lift infantry, and might raise multiple battalions. Occasionally a regiment will have one or more battalions of a different type, such as one that has three lift infantry and one light grav armour battalions, although this is not common. Some regiments are of sub-battalion size or composed of multiple small units with specialised functions. These units are typically broken up and sent to whatever formations need them.

A typical regiment associated with a major world will have two to six battalions and there may be more than one regiment associated with that world. For example, a given world might have a lift infantry regiment with five battalions plus an aerospace defence regiment with two and a grav armour regiment with one. These forces are all part of the Imperial Army but some of them will be based on their homeworld or nearby. Other regiments are raised from whatever recruits are available. In some cases a minor world might contribute a company to a regionally associated battalion but many Imperial regiments are not associated with a particular world.

These may be regional, such as the Guards regiments which are associated with domains of the Imperium rather than specific worlds, or may not be associated with any world at all.

IMPERIAL FORMATIONS

Units raised under the system described above are raised using Imperial funds from taxation and are directly loyal to the Emperor through his officers. Imperial units are trained, organised and equipped according to standards laid down for the entire army. There are provisions for special training and equipment where needed and some variations are inevitable but a force raised or operating in Deneb will in general have similar weapons, equipment and training standards to one from the Old Expanses.

Imperial formations are given a name and a number, which is part of a sequential designation system. They may also have an official or semi-official title such as the 3844th Aerospace Defence Regiment and the 4012th Armoured Regiment (the Corbaird Cuirassiers). These formations comprise the whole of the Imperial Army proper but are not the only forces it can deploy.

CONTRIBUTED FORMATIONS

Contributed formations are not a permanent part of the Imperium's military. They are raised by world governments, corporations and members of the nobility rather than direct Imperial recruitment. These formations are loyal first and foremost to whomever raised the unit but also swear loyalty to the Imperium, the Emperor and his officers when in Imperial service. Contributed Formations are trained and equipped to conform to Imperial Army standards, so can be inserted seamlessly into an Imperial formation.

Whilst in Imperial service these units function like any Imperial formation but can be returned to their 'home service' at the end of a deployment. Many world governments receive a subsidy to maintain Imperial Army-standard formations, giving them enhanced defensive capabilities when the unit is not on active service under Imperial command. Units raised with the intention of being made available for Imperial service are given an Imperial-Army designation, such as the 4518th Lift Infantry (Duke of Regina's Own Huscarles).

There are several reasons why a world government would make part of its forces available for Imperial service. Prestige and the demonstration of loyalty can be useful in politics or when trying to attract

investment, and in regions where there is little conflict the opportunity to maintain current operational experience is essential to avoid the world's forces from becoming ineffective. There is always a bloody learning curve at the start of any conflict but recent experience somewhere in the force can reduce casualties.

ATTACHED FORMATIONS

Attached formations are raised or obtained by a variety of means and may not be equipped and trained to Imperial standards. They are assigned to Imperial command when needed, and can provide either specialist capabilities or bulk out an otherwise small force. They may or may not follow Imperial regulations for organisation or standard procedures, and often require specially trained liaison personnel to ensure effective cooperation.

Attached formations are sometimes built out of whatever small units are available from many sources, such as volunteer militias, mercenaries, corporate security personnel and the personal troops (known as Huscarles) of the nobility. This can be inefficient but as a rule any troops are better than no troops. These formations do not have an Imperial Army designation number and can be named according to almost any local traditions. Unit types often do not correspond to standard formations, so attached troops might call themselves 'columns', 'legions', 'alae' or something entirely different. When in Imperial service a unit built out of several attached formations might be given a temporary ('provisional') designation, which will be withdrawn when the unit is disbanded.

PLANETARY ARMIES

The armed forces of member worlds are generally referred to as planetary armies, which includes their aerospace and some orbital defence forces. Some or all of a world's forces may be trained to Imperial Army standards, and if so may have operated alongside Imperial units offworld. Other elements will be whatever the world feels it needs or can afford. The ability to maintain high-technology equipment is often a limiting factor, so there tends to be a greater emphasis on non-grav transport and equipment that can be locally sourced and maintained.

If Imperial Army forces are assigned to assist in defending a world, the question arises of who commands the overall defence. Typically a small force would be placed under the command of local officers whereas a larger one brings with it the right to

control the overall defence. In some cases jurisdiction is shared, with local forces defending their own cities and an Imperial contingent conducting operations as its commander pleases out of bases granted to it. This can lead to a situation where the local government or its forces want to surrender but the Imperial commander insists on fighting on. There are numerous legal precedents, some of them conflicting due to special circumstances, but the underlying concept is that Imperial forces cannot be ordered to surrender or leave a world by its government. Once invited or assigned, they are at liberty to stay until their commanders choose to leave.

IMPERIAL EQUIPMENT AND ARMAMENT

The Imperial Army is a huge and expensive body, and to have sufficient forces compromises have to be made. The majority of army equipment is manufactured at TL12, enabling contractors on many worlds to benefit from Imperial military budget Credits. This also allows for a degree of competition, which also works towards keeping costs down. Top-end equipment, such as the battle dress used by some specialist units, is manufactured at TL15.

It is notable that the navy and the marines typically get TL15 hardware while the army has to make do with lower-tech items. However, many of the army's opponents are mid-tech forces that cannot produce grav vehicles, or insurgent movements lacking much in the way of resources of any kind. In the current conflict the average Imperial soldier faces an equivalently equipped force and has a slight edge over their Zhodani opponents as a result of access to a quantity of TL15 equipment in critical areas.

An Imperial Army formation can be expected to follow one of the standard equipment patterns, although there will always be some variation imposed by local conditions. Thus virtually all Army infantry formations use one of the approved models of advanced combat rifle or – occasionally – either gauss weapons or some other rifle in one of the approved calibres. A few units favour laser weapons, although this is most common in forces that expect to fight in low gravity.

A number of standard equipment patterns exist and following them makes both procurement of weaponry and resupply with spares and ammunition much cheaper and simpler. New regiments almost always have to comply with one of the standard patterns and

accepted variances but some older formations have more flexibility as a result of regimental tradition. Forces containing non-humans (and non-humanoids) also have greater variance in weaponry, although even then there are strong reasons to use standard calibres and components wherever possible.

These comments apply to units raised to Imperial Army standards; Imperial and Contributed forces. Attached forces and those of planetary armies can have almost any equipment, which need not conform to Imperial standards. However, since Imperial-standard equipment is widely available it is often used by planetary forces as well.

THE IMPERIAL MARINE CORPS

The Imperial Marine Corps is a separate service which does not form part of the army. There is some rivalry between the two, and a fair amount of overlap between their capabilities, but in truth the marines have a different role to the army.

Marines have certain traditional jobs. They serve as ship's troops aboard naval vessels, conducting boardings or small-scale groundside interventions and also guard naval bases and starports. Some marine units are also trained for 'warfighting' deployments rather than security/intervention duty and in this capacity operate in forces of up to brigade size. Larger marine units are very rare, although sometimes a marine force is integrated into an army brigade or division for an operation.

Marines often act as an assault spearhead during wartime operations, especially where a foothold has to be established for army units to be brought in. Marine units tend to be optimised for highly aggressive assaults which are rapidly followed up by other forces, while the army is much better suited to the long slog.

PERSONAL FORCES OF THE NOBILITY

All Imperial nobles have a right to maintain personal forces, which are often known as Huscarles. The term comes from the 'house carls' of Terran nobility in some areas of the long-before-starflight era. Huscarle forces can range from a small security force to a major private army, depending on the means and the needs of the noble in question. Bodyguards are not normally referred to as huscarles unless the noble has enough of them to create a paramilitary force.

Noble huscarles can be equipped and trained any way the noble wants. Some nobles equip and train at least part of their huscarle force to Imperial Army standards and may make it available for service with the army. In the case where the force is quite small – less than a



battalion for instance – then the force is unlikely to be called to service other than to reinforce an army unit or create a composite battalion for lack of anything better. Some nobles maintain sufficiently large forces that they can make one or more battalions available to the Imperial Army. In this case these will usually be Contributed Forces and will nominally exist as a unit of the Imperial Army even when not on active service with it.

When a huscarle unit is on Imperial service, it falls under the normal Imperial Army command structure and cannot be yanked from its deployment on the whim of the owning noble. Nobles' huscarle formations that are part of the Imperial Army structure can be called for service at any time. There is a procedure for this and if it has not been implemented then the force remains the personal command of the noble and cannot be simply ordered around by the Imperial Army commander in the region. The same applies to all Contributed Forces – they remain under the command of whoever raised them unless the army calls them to service, but once called they are part of the army like any other. They cannot refuse to serve and their owner cannot refuse to release them to Imperial service.

Since many of the nobles who contribute forces to the Imperial Army are the senior officials who will be assigned political control of a war in a region, what often happens is that their huscarle force goes into Imperial service, but remains under their direct command as they are acting as the Imperial representative in the region. In this case the huscarle force will typically be used as a personal 'hammer', or a reaction force or reserve as the noble sees fit. They may also be used as his or her personal headquarters security force.

This is not a violation of the concept that the army is commanded by army officers; the huscarle force passes from the command of the owning noble to that of the Imperial representative in the region – who happens to be the same individual. Command is exercised due to the noble's appointment into the proper chain of command and not simply because the noble is a member of the nobility.

Some nobles' huscarle forces include naval and marine elements as well as ground forces. A few can place at the disposal of the Imperium a full combined-arms force with naval transport and even escort vessels. In some regions it is considered the duty of the great nobility to provide such forces. In other areas a noble with so many troops might be considered a little suspect by their peers and perhaps their superiors.

BRIZE LIGHT GRAV VEHICLE

The Imperial Army and many planetary forces use families of standardised vehicles. This helps keep costs down and simplifies logistics, although it does mean that some vehicles are not optimised for the roles they fulfil. Most grav vehicles that are not tanks are referred to as grav sleds, although this is a chassis type rather than a designation so once in service they are often referred to by role – field ambulance, armoured personnel carrier and so forth.

The *Brize* class of grav sled is primarily used for light reconnaissance and artillery spotting duty and transportation of liaison personnel. Militarised air/rafts are also often used for these roles, although 'militarisation' is little more than an appropriate colour scheme and a basic military communications package that allows automatic IFF (Identification Friend-or-Foe). The *Brize*, on the other hand, is a true military vehicle. It is armoured against small arms fire and has an environmental control system but no airlock.

Standard crew is two, a pilot and a vehicle commander who also operates the weapon system, a VRF gauss gun mounted in an open gun-over-hull configuration. It is capable of high elevation and can be slaved to the anti-missile system to provide additional aerospace and missile defence. The anti-missile system is the TL13 'Rotella' light gatling laser, which is also used on most other Imperial armoured vehicles. A decoy launcher is also mounted and the vehicle has all-round armour protection.

The vehicle is manufactured at TL12, with the exception of its anti-missile system and sensor package. These are installed in a 'black box' configuration and can be replaced with cheaper TL12 systems. Not all *Brize* grav sleds have the electronic warfare package or the missile defence system, which takes the cost down by some Cr540000 – around a third of the total cost. Those intended for liaison and utility duty are usually provided in this configuration and may not have armament fitted. However, in its role as a light reconnaissance vehicle the *Brize* is likely to need its advanced defences.

In addition to the crew of two, up to three other personnel can be carried along with a modest amount of cargo. *Brize* grav sleds are sometimes pressed into service as light personnel carriers, utility and logistics vehicles, or are attached to other formations to provide a measure of aerospace and missile defence. While not as common as larger grav sleds, these vehicles have proven their effectiveness over many years of service.

Brize Light Grav Vehicle

TL	12
SKILL	Flyer (Grav)
AGILITY	+4
SPEED (CRUISE)	Fast (High)
RANGE (CRUISE)	6,000 (12,000)
CREW	2
PASSENGERS	3
CARGO	220kg
HULL	28
SHIPPING	7 tons
COST	MCr1.767
TRAITS	—

EQUIPMENT

Anti-Missile System (advanced laser), Autopilot (advanced), Communications System (advanced, encrypted, increased range), Computer/3, Control Systems (advanced), Decoy Dispenser, Fire Extinguishers, Hostile Environment, Life Support (short term), Navigation System (improved), Sensors (advanced, hardened)

Autopilot (skill level)	3
Communications (range)	10,000km
Navigation (Navigation DM)	+4
Sensors (Electronics (sensors) DM)	+2
Camouflage (Recon DM)	-4
Stealth (Electronics (sensors) DM)	—

WEAPONS

Small Turret (VRF gauss gun)

ARMOUR

Front	20
Sides	20
Rear	20
Top	20
Underside	20



WEAPON	RANGE	DAMAGE	MAGAZINE	MAGAZINE COST	TRAITS	FIRE CONTROL
VRF Gauss Gun	1	4D	400	Cr1000	AP 5, Auto 8	+4

SECTOR AND SUBSECTOR COMMANDS

The Unified Armies of the Imperium have their sector headquarters at Mora, unintentionally strengthening the claim by Duchess Delphine that her homeworld should be recognised as the capital of the Spinward Marches. Each Imperial-held subsector has its own army command structure which is assigned forces by sector command. By preference, the Imperial Army presence in any given subsector is composed of units raised on or associated with the local sector. This is not always possible. For example, Lanth has a very low population and economic value but is an important bastion against Zhodani and Sword Worlds aggression. Were the Imperial Army to operate on a militia basis, with regions fielding only the forces they can afford, the entire subsector would be dangerously weak.

Conversely, some regions are unlikely to see major conflict for centuries and might choose to spend their budgets differently if they were permitted to do so. This is unacceptable if the Imperium is to be able to defend itself properly. The units are still raised but a portion are assigned to regions likely to see trouble. The remainder are held in reserve for long-distance redeployment if necessary or to deal with local troubles. Insurgencies and rebellions do occur even in the most peaceful regions.

A subsector like Lanth, which does not have the population base to raise sufficient forces, will be assigned units associated with other subsectors. Some of these are from the Spinward Marches and others from further afield. Many Imperial regiments are not raised in any one particular region, consisting of recruits from minor worlds. In the event a region has a history of rebellion its associated forces will be assigned elsewhere and others brought in to replace them.



JEWELL

Lying directly in the path of any Zhodani advance, Regional Command Jewell is tasked with resisting planetary invasions and making occupation costly in the event of defeat. A full army group is assigned to Jewell itself, along with significant deployments elsewhere, in addition to planetary defence forces. The assigned force mix is biased towards COACC units, which are protected by ground force formations. The logic here is that in the event of an attack, Jewell will face overwhelming force and the enemy will be at the end of a relatively short supply line. If the Zhodani can reach the ground and establish a bridgehead they will be able to defeat any amount of ground forces – especially if they are cut off from resupply.

For this reason Jewell's defences are set up to keep the enemy away from the surface and support a ground campaign for as long as possible. In addition to the world's own defences there are several Imperial armies, each assigned to a region containing one or more deep-site meson guns and interceptor bases. Protected from orbital bombardment by the meson emplacements, ground forces will be able to fight a large-scale conventional campaign until their supplies run out. This will be a considerable period.

It is notable that the Imperial Army bases on Jewell are away from the cities. Some regular army elements are deployed there but defence of the cities is the preserve of local forces which are, to a large degree, equipped and trained to the same standard as regular formations and capable of operating seamlessly with them. This division of commands means the regular army can continue to fight even after the cities have been taken.

The most likely scenario once Jewell's formidable offworld defences are reduced is for the regular and local forces to aggressively repel any attempts to create a bridgehead on planet until they can no longer



do so, then to harass the enemy everywhere whilst concentrating for offensives against lodgements. As forces are ground down the centres of resistance will be reduced one-by-one, with some forces escaping to join another pocket until none remain. Even then, partisan and small-scale 'rogue unit' operations are likely to continue for some time.

An independent Imperial Army is deployed to the subsector, with its headquarters also at Jewell. This force detaches forces to the other worlds, bolstering their defences. It is highly unlikely these worlds can be held against an assault, so this force is also heavy on COACC units, with relatively light ground combat formations which are expected to disperse and harass the enemy until relieved. This 'breakwater tactic' is criticised by many as defeatist but sector command is unwilling to commit large forces to locations where they can be cut off or bypassed.

Regional Command Jewell

Command	Force	Notes
Army Group Jewell	76 th Army	Balanced COACC/Ground force
	98 th Army	Almost entirely composed of COACC forces with light security and defensive elements
	126 th Field Army	Mobile combat force consisting mostly of ground forces
	481 st Army	Balanced COACC/Ground force
	613 th Army	Balanced COACC/Ground force
	966 th Field Army	Reserve formation composed mostly of ground combat units
244 th Army	244 th Army	Independent army command composed mostly of COACC units, dispersed on worlds across the subsector

Regional Command Regina

Command	Force	Notes
Army Group Regina	12 th Aerospace Army	COACC force permanently assigned to Regina
	62 nd Field Army	Mobile ground combat force
	67 th Provisional Army	Mobile combat force established on a temporary basis
19 th Army	19 th Field Army	Primarily ground force dispersed across the subsector
622 nd Army	622 nd Field Army	Primarily ground force dispersed across the subsector

REGINA

Regional Command Regina has its headquarters on Regina, which is also assigned one of the only Imperial armies composed entirely of COACC formations. This huge amount of aerospace defence weaponry augments Regina's own and is backed up by an entire army on Regina itself. This force is complemented by two field armies, composed mostly of ground combat assets. Two additional armies are dispersed across the subsector with a notable concentration at Efate.

ARAMIS

Regional Command Aramis has its headquarters at Aramis, with a forward command element at Nasemin. The subsector is assigned one army, which is understrength and overdue for reinforcement. The force has about a quarter of its strength at Aramis, somewhat more at Nasemin and the remainder dispersed throughout the subsector.



Regional Command Aramis

Command	Force	Notes
765 th Army	765 th Field Army (Provisional)	Mostly ground force dispersed across the subsector

VILIS

Regional Command Vilis has its headquarters at Vilis and is assigned no less than six armies plus some additional forces. At any given time about half the force stands ready to defend Vilis against Sword Worlds aggression, with an army deployed to Frenzie and another to Denotam. An entire army is also deployed to Garda-Vilis to counter an ongoing insurrection there. This assignment rotates through the field forces assigned to Vilis itself, whilst the Frenzie and Denotam commands detach minor forces to deal with troubles in their local area.



Regional Command Vilis

Command	Force	Notes
Army Group Vilis	72 nd Aerospace Army	Mostly COACC force assigned to protect Vilis
	17 th Field Army (Light)	Mobile ground combat force optimised for rapid-reaction operations
	56 th Field Army	Mobile ground combat force
	57 th Field Army	Mobile ground combat force currently deployed to Garda-Vilis
475 th Army	475 th Field Army	Primarily ground force assigned to Frenzie and the neighbouring worlds
58 th Army	58 th Field Army	Primarily ground force assigned to Denotam and the neighbouring worlds

LANTH

Regional Command Lanth has its headquarters and most of its forces at the strategic world of Lanth. Astrographic realities dictate that forces on the other side of the Abyss Rift, such as those deployed on worlds of the Spinward Main, have local command structures and are not assigned to the Lanth regional command. Ghandi and D'Ganzio have no army forces assigned to them as their mainworlds are all but worthless and in any case cannot support a significant deployment. Skull and Extolay are the local command centres, with Extolay reporting to regional Command Regina and Skull as an independent command.

No less than seven armies are assigned to Lanth, mostly made up of forces raised in other sectors or by general recruitment. These are deployed on a similar basis to those at Jewell; it was to be expected that Lanth would be heavily attacked early in any major conflict and that reinforcement would pose a serious problem. Within Army Group Lanth, six of the armies

are deployed as pairs; one being a primary COACC force operating and protecting deep-site meson guns and the other a field force intended to operate under the cover of the meson emplacements. The seventh army



Regional Command Lanth

Command	Force	Notes
Army Group Lanth	277 th Aerospace Army	Mostly COACC force assigned to protect Lanth
	292 nd Field Army	Mobile ground combat force
	661 st Aerospace Army	Mostly COACC force assigned to protect Lanth
	792 nd Field Army	Mobile ground combat force
	318 th Aerospace Army	Mostly COACC force assigned to protect Lanth
	320 th Field Army	Mobile ground combat force
	416 th Field Army (Provisional)	Light force deployed to protect Lanth's cities and to respond to incursions
Army Group Extolay	244 th Aerospace Army	Primarily COACC formation deployed to Extolay
	245 th Field Army	Primarily ground formation deployed to Extolay
99 th Army	99 th Field Army (Provisional)	Primarily ground force assigned to assigned to Skull

is a provisional force comprising relatively light units intended to defend population centres and make rapid-reaction strikes against an invader.

Army Group Extolay has two armies, one primarily a COACC force and the other a mobile field command. Army Group Skull, on the other hand, has just one understrength army and is intended to provide reinforcement and reaction forces all along the Spinward Main. This force will require reinforcement if it is to act as a regional reserve or to supply reinforcements to Lanth.

RHYLANOR

Regional Command Rhylanor is one of the two strategic reserves for the Spinward Marches. Its headquarters is at Porozlo, from whose enormous population numerous regiments have been raised. Three army groups are present on Porozlo, with another at Rhylanor. 1st and

2nd Army Group Porozlo alternate between active and ready status. The active army group detaches forces to deal with trouble spots across the sector while the other is maintained in a ready state to deploy en masse wherever it is needed. Army Group Spinward Marches Reserve receives units to be brought up to full readiness or which are retraining, and acts as a strategic reserve for the coreward half of the subsector.

The pattern of deployment at Rhylanor is similar to that used at Regina. As a fortress world, Rhylanor has a permanent Imperial Army deployment, with huge COACC forces operating and protecting deep-site meson guns and interceptor bases. Each of the world's two COACC armies is partnered with two other entire armies. One of these is a standard field army with the usual force mix whilst the other is skewed towards aerospace superiority and fast strike formations using relatively light vehicles and equipment.

Regional Command Rhylanor

Command	Force	Notes
1 st Army Group Porozlo	444 th Field Army	Primarily ground force formation
	614 th Field Army	Primarily ground force formation
	615 th Field Army	Primarily ground force formation
	712 th Aerospace Army	Primarily COACC formation with some ground combat elements
2 nd Army Group Porozlo	125 th Field Army	Primarily ground force formation
	167 th Field Army (Light)	Rapid-reaction force optimised for strike operations
	782 nd Field Army	Primarily ground force formation
	600 th Aerospace Army	Primarily COACC formation with some ground combat elements
Army Group Spinward Marches Reserve (Rhylanor Contingent)	218 th Field Army	Primarily ground force formation
	219 th Field Army	Primarily ground force formation
	Army Reserve, Spinward Marches Sector	Administrative formation holding heavy siege formations and much of the sector artillery reserve
	583 rd Field Army	Primarily ground force formation
	401 st Aerospace Army	Primarily COACC formation with some ground combat elements
Army Group Rhylanor	322 nd Composite Army	Administrative and holding formation for specialist units including maritime and hostile environment units
	12 th Aerospace Army	Mostly COACC force assigned to protect Rhylanor
	814 th Field Army	Mobile ground combat force
	717 th Field Army	Light aerospace/strike force
	722 nd Aerospace Army	Mostly COACC Force assigned to protect Rhylanor
	276 th Field Army	Mobile ground combat force
	341 st Field Army	Light aerospace/strike force



Regional Command Sword Worlds

Command	Force	Notes
Army Group Caladbolg	368 th Field Army (Provisional)	Understrength composite force

SWORD WORLDS

The Imperial Army presence in the Sword Worlds is limited to a single composite COACC/field army based on Caladbolg. It has a full regional command designation and could, in theory, receive reinforcements for a push into Sword Worlds territory.

LUNION

Regional Command Lunion has its headquarters at Lunion, with a forward command installation at Tenalphi. It also contains the primary intelligence and special operations headquarters for the sector, which is located at Strouden. An army group is forward-deployed at Tenalphi with another at Lunion.

Regional Command Lunion

Command	Force	Notes
Army Group Lunion	75 th Aerospace Army	Primarily COACC formation
	98 th Field Army	Mobile ground combat formation
	518 th Aerospace Army (Provisional)	Experimental formation with heavy but mobile COACC formations
	694 th Reserve Army	Reserve formation organised as an understrength mobile ground formation
Army Group Tenalphi	189 th Aerospace Army	Primarily COACC formation
	210 th Field Army	Mobile ground combat formation
	700 th Army (Light)	Rapid-reaction force with relatively light equipment
Army Command Tenalphi	461 st Army (Provisional)	Administrative and holding formation for various specialist units



Regional Command Mora

Command	Force	Notes
Army Group Mora	286 th Field Army (Light)	Rapid-reaction force containing mostly light units
	472 nd Field Army	Primarily ground combat formation
Army Group Spinward Marches Reserve (Mora Contingent)	241 st Field Army (Light)	Rapid-reaction force comprising mostly light formations
	248 th Field Army	Primarily ground force formation
	251 st Aerospace Army	Primarily COACC force
	308 th Field Army	Primarily ground force formation
	319 th Field Army	Primarily ground force formation
	539 th Field Army (Composite)	Holding and administrative formation for 'orphaned' and as yet unassigned units
	Army Reserve, Spinward Marches	Administrative formation holding heavy siege formations and much of the sector artillery reserve

MORA

Regional Command Mora is the second major army reserve for the Spinward Marches and also the sector headquarters. Two army groups are based at Mora. One is assigned to peacekeeping operations within the subsector whilst the other is the sector's deep reserve. Mora does not officially have 'fortress world' status and has not been assigned a permanent Imperial Army COACC defence force, although its own defences are formidable.

FIVE SISTERS

Regional Command Five Sisters has its headquarters at Mirriam. Only two armies are based in the subsector, at least officially. There are persistent rumours of additional forces deployed to hidden bases and that units are rotated between locations to conceal their numbers. This is almost certainly connected with Imperial interests in the interdicted Droyne worlds of Andor and Candory.

Regional Command Five Sisters

Command	Force	Notes
244 th Army	244 th Field Army	Primarily ground combat formation with some specialist units
317 th Army	317 th Field Army	Primarily ground combat formation, with some rapid-reaction and specialist units

Regional Command Glisten

Command	Force	Notes
Army Group Glisten	192 nd Field Army	Primarily ground combat formation
	719 th Field Army	Primarily ground combat formation, with some rapid-reaction units
	722 nd Reserve Army (Provisional)	Composite formation acting mainly as an administrative apparatus for specialist units and formations intended to operate dispersed or replace losses among the command's other armies

244th Army is usually kept concentrated at its base and is known to include specialist anti-psionic units. 317th Army includes light rapid-reaction formations and often has detachments on other worlds in the subsector. It is also responsible for any operations taking place on the neutral worlds between the Five Sisters and the Darrian Confederation. Inconvenient as it is, 317th Army is also the primary Imperial/Darrian liaison formation and provides advisors to the Darrian Confederation.

GLISTEN

Regional Command Glisten is responsible for any operations into District 268 as well as its own subsector. Its headquarters is on New Rome, whose large

population have supplied several regiments to the Imperium. Three armies are assigned to this command, of which the core 722nd is permanently assigned to New Rome. The other two are likely to be broken down or at least have significant elements dispersed across the subsector and perhaps into District 268.

TRIN'S VEIL

Regional Command Trin's Veil has only one full army assigned to it, which is intended to deal with problems in the subsector. A second army is designated but is grossly understrength and serves mainly as an administrative apparatus for units not assigned elsewhere. The army headquarters is on Trin itself.

Regional Command Trin's Veil

Command	Force	Notes
325 th Army	325 th Field Army	Primarily ground combat formation with some rapid-reaction formations
	584 th Reserve Army (Provisional)	Composite formation acting mainly as an administrative apparatus, with many units dispersed to other worlds in the subsector



SMALL-UNIT ORGANISATION

The Imperium uses lift infantry as its primary combat force, organised into sections containing two squads and a command element. Individual soldiers are equipped with combat armour and a personal weapon, and grouped into platoons which contain armoured grav transports. Transport in an Imperial lift infantry formation is organic; it belongs to the formation and cannot be reassigned without dismantling and rebuilding the force. Vehicles mount a support weapon capable of engaging light armoured vehicles or providing aerospace defence. Whilst not tanks, these vehicles are capable of sweeping aside mid-tech armoured vehicles and are survivable even on a high-tech battlefield.

A section consists of a mobile or 'rifle' element and a support element which is normally accompanied by the unit leader. There is much debate as to whether the primary combat power of a small unit is the rifles of its members, or whether it is the support weapon. In the former case tactics revolve around getting rifles into an advantageous position, with the support weapon suppressing enemy resistance. The Imperium prefers the opposite approach, however; the support gunner is considered to be the primary combat asset. Tactics are based, where possible, on getting the heavy weapon into a decisive position with rifle-armed soldiers protecting the gunner, reacting to threats and carrying additional ammunition for the weapon.

One soldier in the section is a designated grenadier, who has received additional training in the use of rifle grenades. In theory any soldier can launch a grenade and everyone is issued one. However, standard practice is to pass weapons to the soldier most likely to hit the target. The designated grenadier functions as a rifleman most of the time.

A force as small as a section will never be far from a higher formation or command element. Its leader is likely to be a corporal with a few years' service at most and may be surprisingly inexperienced. At this level, handling a force is about obeying orders issued locally, which are likely to be quite specific. A section is intended to be capable of acting with initiative and putting down sufficient firepower to deal with most equivalent threats. The situation is a little different for marines acting as ship's troops, who may be deployed aboard smaller vessels in forces no larger than a section, but even there the section is under the command of the vessel's senior officers. A marine sergeant will not be making strategic decisions under most circumstances.

IMPERIAL INFANTRY SECTION

Command Element

- Section Leader (Rifle)
- Designated Grenadier (Rifle)

Rifle Element

- Squad Leader (Rifle)
- Rifleman (Rifle) x3

Support Element

- Squad Leader (Rifle)
- Rifleman (Rifle)
- Support Gunner (Light Support Weapon)
- Assistant Gunner/Loader (Rifle)

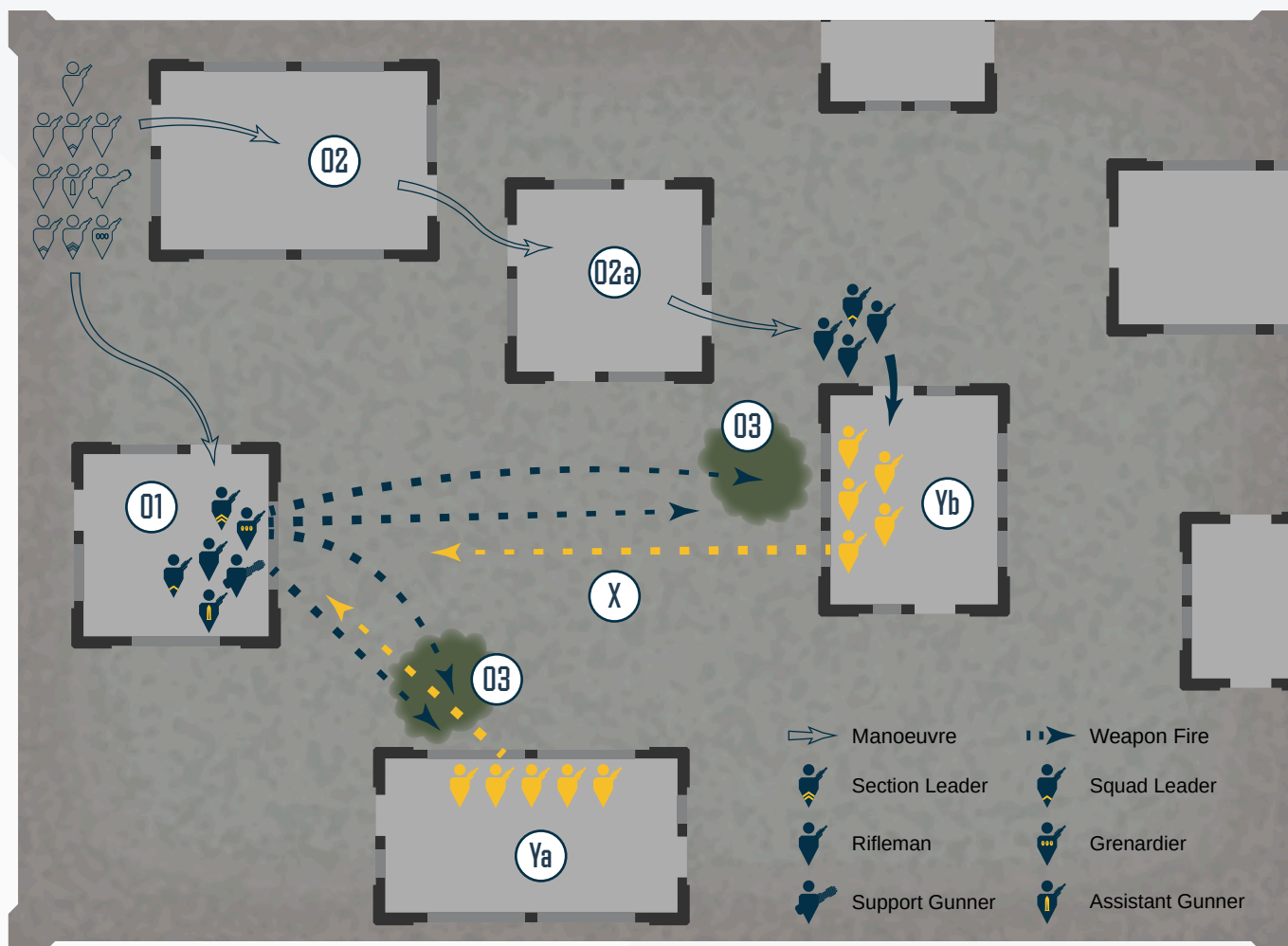
DOCTRINE: HANDLING AN INFANTRY SECTION

An Imperial Army infantry section has been tasked with clearing hostiles from a cluster of buildings while other sections of the platoon carry out similar tasks or wait in reserve. The section is operating dismounted as the cluttered terrain does not permit its vehicles to bring their support weapons into the area. Vehicles will have withdrawn to a secured larger area or returned to battalion headquarters.

The enemy has attempted to create a killing ground in an open area (X) and has positioned troops in two buildings (Ya and Yb) where they can fire on anyone blundering across it. Alert to the possibility of an ambush the Imperial section leader decides to move through the buildings instead of in the open despite this being slower. The support element, accompanied by the section leader and designated grenadier, clears their building (1) and sets up a fire position. They are soon noticed and come under fire from both enemy forces.

Meanwhile, the rifle element clears its first target building (2). As firing breaks out on their flank, the members of this team are ordered to advance under cover through building (2a). If they encountered resistance, the section leader would likely call for reinforcements. Since they do not, they are able to establish themselves close to (Yb).

The support element has been engaging the nearest enemy group (Ya) and cannot leave them completely unengaged. The squad leader orders thermal obscurant grenades to be passed to the designated grenadier, who quickly drops smoke to obscure both enemy buildings (3). The squad leader and grenadier



continue to fire in the general direction of (Ya) to keep the attention of this force whilst the support element lays down heavy suppressing fire on the more distant enemy group (Yb).

Obscured by smoke and covered by fire the four members of the rifle element make a rapid dash to a close assault position and enter the building preceded by hand grenades. Incoming fire will hopefully be minimal and ineffective due to obscurants and the actions of the support group.

Once (Yb) is secured the rifle team will turn their fire on (Ya) or may even be able to move up and assault the position from the rear. In this case the support weapon has remained stationary throughout the action but plays a decisive role in suppressing the enemy in the main target building. Its firepower facilitates the movement of the rifle element, whilst the grenadier assists as directed by the section leader.

LIFT INFANTRY PLATOON

At the platoon level and higher, most formations consist of four elements – typically three ‘contact’ elements and one support and command element. Standard tactics are to deploy in a ‘two wings and a reserve’ formation with two of the contact elements forward and one close behind them to provide support. The support element may reinforce this group or might detach some of its personnel for other tasks, and will act as a final reserve. Typically one wing will ‘grip’ the enemy front while the other attempts to flank, with the reserve reinforcing one or the other as needed or covering a disengagement.

This general model is followed at all levels, although the weapons involved will change as forces become larger. In an infantry platoon the support element might have light shoulder-fired missile systems. In a lift infantry brigade the support element is likely to be using field artillery such as mass driver guns or even meson sleds. The basic system of contact and support remains much the same, however.

The lift infantry company is the basic tactical unit in most Imperial operations. It consists of four platoons of lift infantry, each with four sections, and rides in grav-mobile armoured personnel carriers. Standard weapons aboard a grav APC are VRF (Very Rapid Fire) gauss guns, light missile launchers or sometimes laser cannon. The company does not contain maintenance and repair equipment, which is deployed at the battalion level but vehicle crews have access to tools and spares sufficient to deal with minor breakdowns and combat damage. Most vehicles have a crew of two; a driver/mechanic and a commander/gunner, who are considered to be part of the section they transport. Support vehicles do not have space to carry infantry as they mount additional weapon systems.

IMPERIAL LIFT INFANTRY PLATOON

Command Element

Command Vehicle (Grav APC, aerospace defence weapon)

Command Section

Platoon Commander (Lieutenant)
Platoon Senior NCO (Sergeant)
Communications Specialist
Platoon Medic
Platoon Marksman
Missile Gunner
Assistant Missile Gunner
Vehicle Commander
Vehicle Driver

Lift Infantry Vehicle (Grav APC, support weapon) x3

Rifle Section

Command Element

Section Leader (Rifle)
Designated Grenadier (Rifle)
Vehicle Commander
Vehicle Driver

Rifle Element

Squad Leader (Rifle)
Rifleman (Rifle) x3

Support Element

Squad Leader (Rifle)
Support Gunner (Support Weapon)
Assistant Gunner/Loader (Rifle) x2

This force is capable of a limited form of combined-arms operations. Infantry will debus to fight, receiving support from their vehicle's support weapon, while the command and support element can provide some aerospace defence. If appropriate the force can make what is in effect an armoured assault, relying on the mobility and light armour of its vehicles to overrun an

enemy position. Against mid-tech opponents this tactic yields easy victories, which can result in complacency and unnecessarily high losses when used against better equipped units with anti-armour weapons.

DOCTRINE: LIFT INFANTRY PLATOON ENCOUNTER

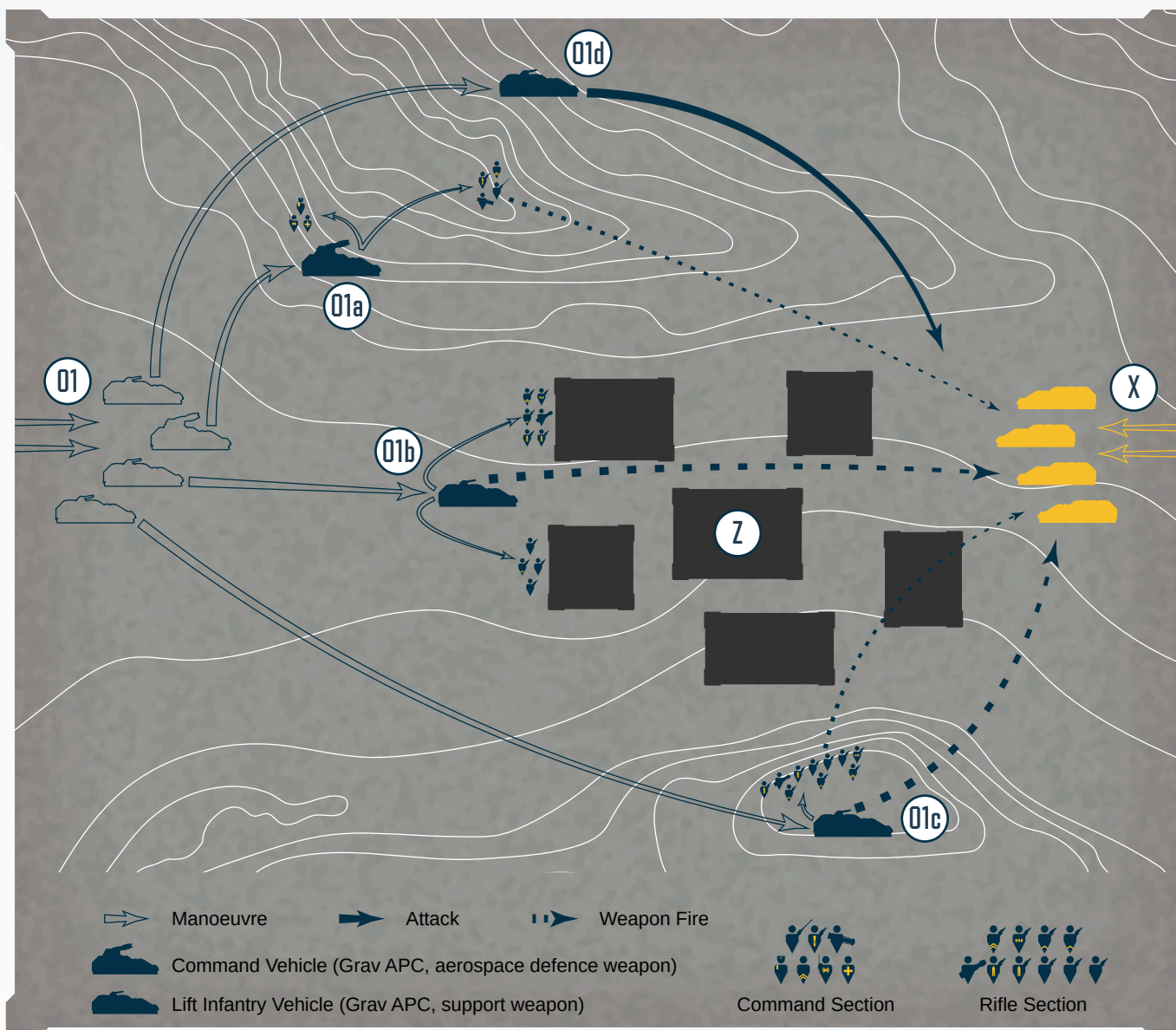
An Imperial lift infantry platoon is moving in four vehicles to secure an objective on the flank of the main advance. This is a group of buildings (Z) which could be used as cover for aerospace defence weapons set up to deny freedom of movement in this area of the battle zone. The platoon encounters a similar sized force (X) moving in the opposite direction, which is quickly established as lift infantry and does not contain tanks. The unit's commander believes the objective can be taken and held.

The command vehicle (1a) veers off its path of advance and moves to the cover of a nearby ridge. Its gunner commences long-range fire on the enemy with the vehicle's gauss gun whilst the personnel aboard debus. The platoon marksman and the missile team are sent up the ridge to get a clear shot at the enemy's vehicles.

Meanwhile the foremost of the three rifle section carrying APCs is ordered to advance at maximum speed to reach the objective first. The vehicle grounds close to the buildings (1b) and opens fire while its personnel debus and dash into defensive positions. Another APC (1c) is ordered to the flank, landing on a low rise south of the objective and deploying its troops. The rearmost vehicle dashes up to the northern ridge and remains concealed there for a moment.

Incoming fire causes the enemy commander to deploy from column of march to line of battle, slowing the advance and ensuring elements of the Imperial force reach the objective first. The odds look good at first – four to one odds at the objective, although the Imperials have hastily taken cover and are firing vigorously. However, the reality soon becomes apparent. Missiles from the northern ridge are targeting the advancing Zhodani vehicles and flanking fire from the southern rise makes an infantry deployment costly.

The sudden appearance of the last Imperial vehicle (1d), streaking onto the flank and deploying its infantry at close range, makes it clear the objective cannot be taken without unacceptable casualties. The Zhodani force cuts its losses and begins a retirement. Whichever side gets reinforcements to the objective 'the fustest with the mostest' as the saying goes, will end up holding it but for now the aggressively handled Imperial platoon has achieved its intentions.



IMPERIAL LIFT INFANTRY COMPANY

The company is the building-block of lift infantry formations. Its organic transport assets provide mobility and fire support while the infantry are capable of clearing out most opponents. A modicum of anti-armour and aerospace defence capability is provided by the missile teams at platoon and company level. If necessary for the mission, extra capabilities can be provided by small groups of attached troops. However, a company is not intended to sustain itself in the field in the longer term. Support elements such as armoured vehicle maintenance are held at the battalion level and will usually be supplemented by access to larger-scale facilities at higher command levels.

The company consists of four elements; three lift infantry platoons and a support/command platoon-equivalent. It will normally be commanded by a captain but may have a major in command instead. This usually happens when a senior company commander is 'wearing two hats' and has a role at battalion level but has not yet been replaced as company commander and therefore cannot move fully into the new post. Alternatively, the officer may be highly experienced but has not yet been moved into a higher position.

Some units prefer to retain officers at the company command level for longer than is average in order to benefit from their experience, and some officers either do not want to move yet or are deemed unsuitable. It

is not always immediately obvious whether a major in command of a company is there due to excellence in the role, the unavailability of a suitable post... or because they are incapable of making the jump from leading soldiers in the field to the higher aspects of command.

The company headquarters consists of four vehicles. Two are command variants of the standard APC, equipped with a missile launcher or other aerospace defence weapon. Exactly who rides in which vehicle depends on circumstances, although standard practice is for the commander and executive officer to always be in separate vehicles. Usually the executive officer acts as a mobile command asset while the company commander is further back, although at the company level the difference is often marginal. HQ runners are trusted soldiers who may actually hold very low rank but are reliable. They provide security for the company headquarters and may be sent off to perform whatever tasks are needed, which may include protecting the company medic or reinforcing a battered section in one of the platoons.

The company marksman is simply the best shot the company has and will usually be equipped with a version of the standard rifle that has greater long-range accuracy. Marksmen are not fully trained snipers – they are infantry soldiers with good shooting skills rather than experts in concealment and observation. The company marksman will receive additional training which will then filter down to comrades on the range and in the field.

The two support vehicles are variants of the standard APC set up for fire support. These vehicles have little room for troops as their rear section is given over to a weapon and ammunition stowage, plus some additional space for general stores and supplies. Indirect fire support weapons are preferred for such vehicles as they can be fitted with relatively minor alterations, as opposed to needing to install a turret mount for direct-fire weaponry. Support vehicles retain their missile defence and VRF gauss gun systems.

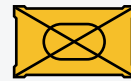
LIFT INFANTRY COMPANY

Headquarters/Support Platoon

- Command Element
 - Command Vehicle (Grav APC, aerospace defence weapon)
 - Command Section
 - Company Commander (Captain)
 - Platoon Senior NCO (Sergeant)
 - Communications/Electronic Warfare Specialist
 - Company Medic
 - Vehicle Commander
 - Vehicle Driver
 - Command Support Vehicle (Grav APC, Aerospace Defence Weapon)
 - Command Support Section
 - Company Executive Officer (Lieutenant)
 - Communications/Electronic Warfare Specialist
 - Company Marksman
 - Headquarters Runner (Rifle) x3
 - Vehicle Commander
 - Vehicle Driver
 - Support Element
 - Support Vehicle (Grav Vehicle Fire Support Weapon) x2
 - Vehicle Commander
 - Vehicle Driver
 - Support Weapon Crew

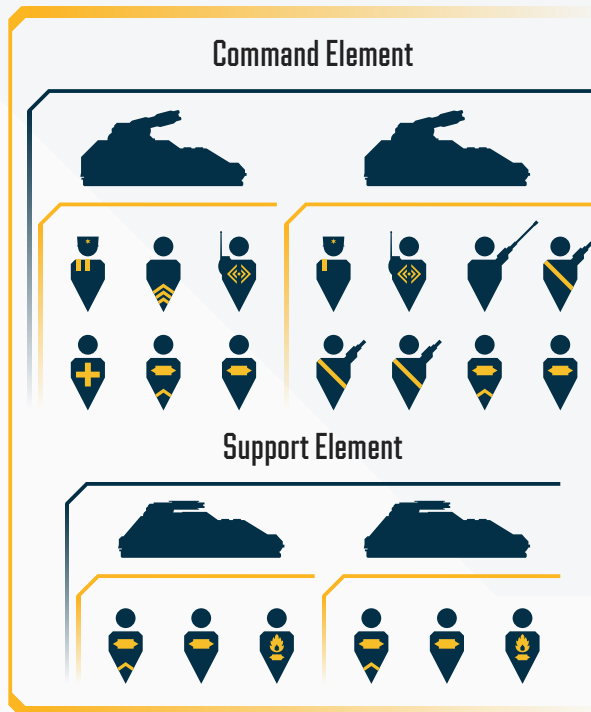
Lift Infantry Platoon x3

- Command Element
 - Command Vehicle (Grav APC, aerospace defence weapon)
 - Command Section
 - Platoon Commander (Lieutenant)
 - Platoon Senior NCO (Sergeant)
 - Communications Specialist
 - Platoon Medic
 - Platoon Marksman
 - Missile Gunner
 - Assistant Missile Gunner
 - Vehicle Commander
 - Vehicle Driver
 - Lift Infantry Vehicle (Grav APC, support weapon) x3
 - Rifle Section
 - Command Element
 - Section Leader (Rifle)
 - Designated Grenadier (Rifle)
 - Vehicle Commander
 - Vehicle Driver
 - Rifle Element
 - Squad Leader (Rifle)
 - Rifleman (Rifle) x3
 - Support Element
 - Squad Leader (Rifle)
 - Support Gunner (Support Weapon)
 - Assistant Gunner/Loader (Rifle) x2

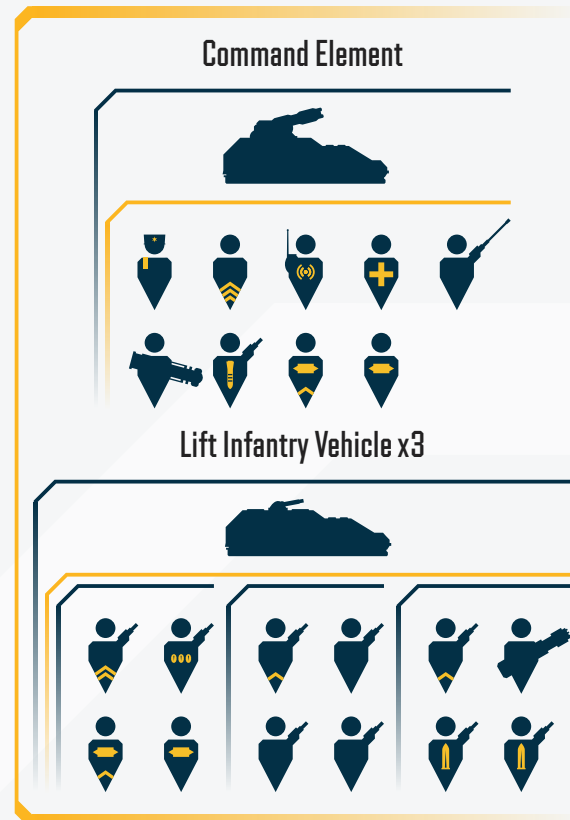


IMPERIAL LIFT INFANTRY COMPANY

Headquarters/Support Platoon



Lift Infantry Platoon x3



KEY



Grav APC, Aerospace
Defence Weapon



Grav APC,
Support Weapon



Grav Vehicle, Fire
Support Weapon



Captain



Corporal



Lieutenant



Squad Leader



Sergeant



Vehicle Commander



Communications/
Electronic Warfare
Specialist



Communications
Specialist



Medic



Marksman



Headquarters
Runner



Vehicle Driver



Rifleman



Grenadier



Missile Gunner



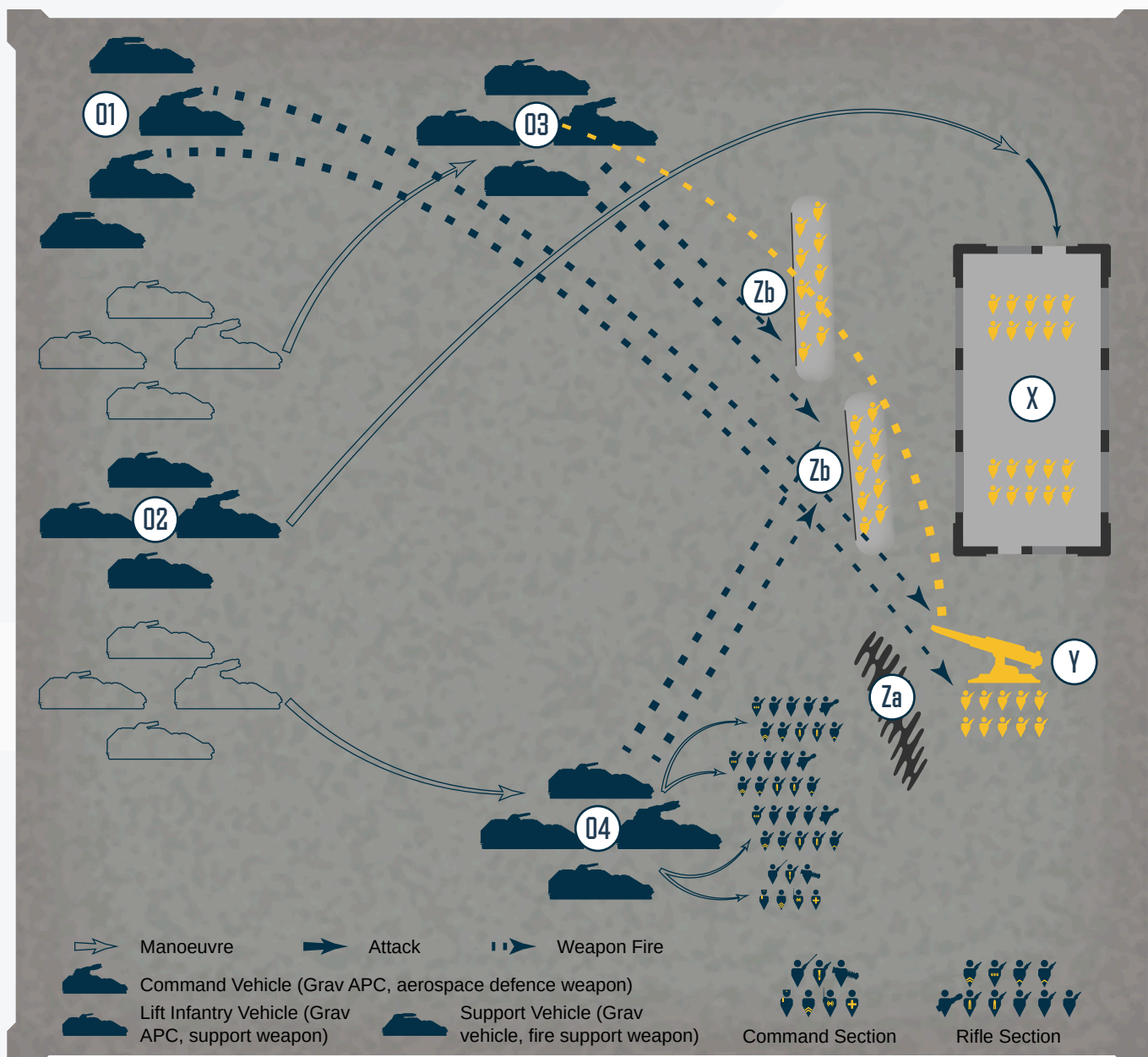
Assistant
Missile Gunner



Support Gunner



Assistant
Gunner/Loader



DOCTRINE: LIFT INFANTRY COMPANY ATTACK

It is rare for a lift infantry company to operate alone, unless deployed against very weak or low-tech opponents. More commonly a company attack will take place in the context of a much larger operation. The company commander will be able to call for assistance in the form of artillery, additional lift infantry, armour or grav gunships. Whether or not these are available depends on circumstances, of course, but effective communications protocols mean that at least the request will get through to the company commander's superiors.

In this case, enemy forces have occupied a building (X) which they are using as a command post. They have a direct-fire anti-armour weapon (Y) and have created barricades to screen and conceal it (Za) as well as trenches in which infantry are deployed (Zb).

The company command element (1) remains in support and one rifle platoon (2) is held in reserve as the two wings, each composed of one platoon, (3 and 4) deploy for the attack. The left flank element (3) advances first, not directly at the enemy trenches but attempting to flank them if terrain permits. The vehicles' VRF gauss guns attempt to suppress the defenders with enfilading fire.

With the enemy's front 'gripped' by one platoon (3), the right wing (4) advances to enfilade the central trench and deploys its infantry to assault the barricades. Meanwhile, the enemy's anti-armour weapon reveals its position by firing on (3). Indirect fire is brought down on it from the mortars of the command/support element (1).

With the anti-armour weapon out of action or its crew driven under cover, the two wings continue their advance, firing on the enemy's forward positions to suppress them or – ideally – drive the enemy from them. With incoming fire greatly reduced, the reserve element (2) dashes to the flank and its infantry component disembarks to assault the building. Covered by their vehicles' support weapons the reserve element enters and begins to clear the building. Throughout the action the command/support elements remain in reserve, ready to move up to exploit an opportunity or acting as cover for a retirement.

THE *TORANA* FAMILY OF GRAV VEHICLES

The *Torana* family of grav vehicles is built on a standard chassis and configured as a 'streamlined box' with a wedge-shaped front end. From the outset it was intended that this chassis would be used for multiple vehicles, of which the most common was to be an armoured personnel carrier capable of light support. The family has now been in service for decades and is due to be replaced in 5–10 years by a new design designated *Astrin*. Whether or not this replacement will be total depends on budget considerations. Either way, if the *Astrin* design performs acceptably in its evaluation process large numbers of *Toranas* will become available for conversion or sale. The most likely scenario is for the *Torana* to be phased out as an APC, but remain in service as the basis of specialist vehicles.

The *Torana* family is constructed at TL12 by a variety of contractors, whereas the *Astrin* is a TL14 vehicle which can only be produced at a limited number of locations. This has caused much controversy and is the basis of accusations that certain megacorporations have unfairly influenced the selection process. It is entirely likely that many planetary armies will choose not to upgrade their APC fleet, resulting in a divide that could affect logistics and interoperability. Proponents of the *Astrin* project

point out that at present the most likely external threats – the Solomani Confederation and the Zhodani Consulate – both have TL14 equipment in service. How valid this argument is, given that the *Astrin* is a transport vehicle rather than a weapon system, is an open question.

The basic *Torana* costs over seven million Credits and is designed to carry a full 10-soldier infantry section in its rear compartment, plus their equipment. 23 Spaces are allocated to this area, which is accessed by wide rear doors and can be used to carry other equipment aboard a specialist vehicle. When in APC configuration the *Torana* can in theory carry 3,250 kilograms of cargo in addition to its infantry complement but in reality this is not the case. A soldier in combat armour needs more space than the typical person, especially if they are to get ready to deploy in a hurry. Getting out of a minimal seat and climbing over piles of equipment is not conducive to rapid operations.

The *Torana* is powered by high-capacity fuel cells which must be recharged from a reactor-equipped support vehicle. It is protected by a TL13 Rotella missile defence system and carries a TL13 sensor package in the same manner as the *Brize* class. A DSW-4 VRF gauss gun is mounted atop the main hull for fire support and is capable of high-angle fire against targets in tall buildings or aerospace threats.

One variant is the *Torana-F*, which carries an advanced fusion plant (10 Spaces) plus spares and tools. The 'F' stands for 'field support', although most people insist it means 'fusion'. *Torana-Fs* are deployed at the battalion level, enabling a unit in the field to recharge fuel cells and to conduct basic repairs and maintenance. The reactor adds MCr2 to the cost of the basic chassis and permits a further variant to be created. This is the *Torana-ND*, or 'Noddy' variant, which crams a nuclear damper into the rear chamber alongside the reactor. The damper is controlled by the vehicle commander, who must also operate the weapons and defensive systems if the vehicle comes under attack. A *Torana-Noddy* costs Cr9583000 and cannot carry much more than the personal equipment of its overworked crew.

Torana Grav Vehicle

TL	12
SKILL	Flyer (Grav)
AGILITY	+2
SPEED (CRUISE)	Fast (High)
RANGE (CRUISE)	6,000 (12,000)
CREW	2
PASSENGERS	10
CARGO	3.25 tons
HULL	80
SHIPPING	20 tons
COST	MCr7.083
TRAITS	—

EQUIPMENT

Airlock, Anti-Missile System (advanced laser), Autopilot (advanced), Communications System (advanced, encrypted, increased range), Computer/3, Control Systems (advanced), Decoy Dispenser, Fire Extinguishers, Hostile Environment, Life Support (short term), Navigation System (improved), Sensors (advanced, hardened)

Autopilot (skill level)	3
Communications (range)	10,000km
Navigation (Navigation DM)	+4
Sensors (Electronics (sensors) DM)	+2
Camouflage (Recon DM)	-4
Stealth (Electronics (sensors) DM)	—

WEAPONS

Small Turret (VRF gauss gun)

ARMOUR

Front	34
Sides	32
Rear	30
Top	29
Underside	29



WEAPON	RANGE	DAMAGE	MAGAZINE	MAGAZINE COST	TRAITS	FIRE CONTROL
VRF Gauss Gun	1	4D	400	Cr1000	AP 5, Auto 8	+4

LIFT INFANTRY BATTALION

It is unlikely that a lift infantry company would be operating in isolation unless it was pitted against truly feeble opponents. Normally the smallest formation that would be deployed for serious combat is the battalion. A lift infantry battalion will normally consist of four company-equivalents; a headquarters company which contains specialist sub-units necessary to keep the force effective, two lift infantry companies and a support company. Most of the vehicles in the battalion are based on the same grav sled chassis, greatly simplifying the task of maintaining and repairing the unit's vehicles.

HEADQUARTERS COMPANY

The composition of a lift infantry battalion reflects the intention that it be able to support itself on deployment without requiring specialist units. This is in some ways inefficient but the Imperial Army needs to be able to fight a small-scale counter-insurgency campaign with the same forces used to battle a highly technological opponent fielding tens of thousands of troops. The lift infantry battalion is the building-block and 'sharp end' of most Imperial formations. The headquarters company consists of:

Battalion Headquarters: The headquarters contains the commanding officer and executive officer, the senior battalion NCO, a group of staff officers and a security element equivalent to a lift infantry platoon. The HQ vehicles include the command and communications variants of the standard grav APC, with additional battle-management and communications equipment in the space that would normally accommodate infantry soldiers. Vehicles are typically armed with aerospace defence weapons as they are not intended to engage in direct combat.

Reconnaissance/Scout Platoon: The scout platoon uses light grav vehicles which are likely to be a mix of militarised air/rafts mounting a light support weapon on a pintle mount and better protected vehicles such as the *Brize* class. Four personnel are usually assigned to a vehicle: pilot, commander and two infantry soldiers. In addition to conducting local reconnaissance, the scout platoon can serve as a reaction force or provide flank security as needed

and is often the unit commander's preferred odd-job squad. Personnel are trained to act as artillery observers and have access to small reconnaissance drones which are launched from their vehicles.

Medical Platoon: Standard composition of a medical platoon is a mobile aid station on a standard grav APC chassis, commanded by the battalion medical officer, plus five air/rafts which serve as ambulances to evacuate the wounded. This is in no way a field hospital; the aid station is set up to stabilise injured personnel so they can be evacuated to a proper medical facility.

Maintenance Platoon: Like other specialist elements the maintenance platoon does not follow the standard infantry platoon composition. It is equipped with two grav-mobile recovery/workshop vehicles and two grav APCs which carry the unit's mechanics and technicians. These personnel are armed and can fight but typically remain out of direct contact with the enemy if at all possible.

Service Platoon: The service platoon has three grav APCs, which are usually unarmed. One is set up as a field kitchen while the others carry personnel and robots necessary to keep the unit fed in the field.

LIFT INFANTRY COMPANY

A lift infantry company consists of three 'line' or 'rifle' platoons and a headquarters/support element.

Headquarters Platoon: The headquarters platoon consists of the commanding officer and executive officer, the company sergeant and a small group of administrative personnel. It has four grav APCs of which one will be a command variant armed with an aerospace defence weapon. Another is a standard APC, also equipped with an aerospace defence weapon. The others may be standard vehicles or, in some units, equipped with a light artillery weapon such as a support mortar. This takes up much of the space normally used to carry personnel but does give the company some self-support capability.

Lift Infantry Platoon: Each lift infantry platoon consists of four grav APCs, armed with direct-fire support weapons such as VRF gauss guns or laser cannon, which provide transport for the platoon headquarters element and three rifle sections. A more detailed breakdown of the personnel involved is found on page 94.

SUPPORT COMPANY

The support company is equipped with light grav tanks or grav gunships and is set up to provide direct fire support to the rifle platoons. It consists of the company headquarters plus three fire support platoons. Some commanders prefer to break up the support company, adding a fire support element to each of the rifle companies whilst retaining some of the support elements as a mobile reserve. Others keep the support company concentrated to maximise its firepower. Although the support company's primary strength is cavalry units – grav tanks or gunships – it does have a minimal infantry component to deal with local eventualities.

Headquarters Element: The support company's headquarters element consists of four vehicles, usually two command-variant APCs armed with aerospace defence weapons, an APC carrying a lift infantry section for security and as a final reserve, and a light grav tank.

Fire Support Platoon: Each fire support platoon has four vehicles, which may be light grav tanks or grav gunships.

LIFT INFANTRY BATTALION

Headquarters Company

- Battalion Headquarters Platoon
- Recon/Scout Platoon
- Medical Platoon
- Maintenance Platoon
- Service Platoon

Lift Infantry Company x2

- Company Headquarters Platoon
- Rifle Platoon x3

Support Company

- Company Headquarters Platoon
- Fire Support Platoon x3

DENEb LIGHT GRAV TANK

The *Deneb* class of light tank was developed as a support system for the lift infantry rather than as a main battle tank. Like the APCs used by the infantry, the *Deneb* is constructed at TL12 and has some interchangeable components with those vehicles, although it is a completely separate design. Hull form is the typical curved wedge, with a large turret mounted well to the rear of the main hull.

Armour is very light for a tank, a trade-off that permits the *Deneb* to attain the same speeds as the APCs it is designed to support. Grav vehicles typically face attacks from a greater variety of angles than ground vehicles but armour positioning is biased towards the front of the vehicle to permit turning the strongest face towards incoming fire. Protection is augmented with reactive armour, reflecting the likelihood that these vehicles will face mid-tech opponents much of the time. The sort of guns carried by Zhodani main battle tanks will annihilate the reactive armour – and quite likely the tank underneath it – but mid-tech missiles and projectiles would be easily defeated.

Armament consists of a DFW-58A2 heavy gauss cannon and a co-axial DSW-4 VRF gauss gun, both housed in the large turret along with ammunition stowage and an autoloader. The crew of three are carried within the main hull and can in theory survive a catastrophic hit on the turret. Nevertheless, survival on a high-tech battlefield depends upon a *Deneb* light tank not being hit. Staying low and using terrain to hide from hostiles, combined with high acceleration and fast movement when not in cover, are essential.

The *Deneb* is used by lift infantry units as a support asset and also by some armoured reconnaissance formations. It can also be encountered screening or providing flank security to heavier armoured units, although vehicles mounting fusion weapons are generally favoured in this role. The heavy gauss cannon does not produce radiation, enabling the *Deneb* to be used in proximity to non-combatant populations but where the 'big boys' are blasting away with their dirty cannons there is no reason for their supports to show restraint.

There are few variants of the *Deneb*. A fusion gun armed tank-destroyer version was not a success as it was deemed too lightly armoured for the role. A command tank version is used in most units that operate *Denebs* and an aerospace defence variant has been provided to some formations. Overall, the *Deneb* is an attempt to create a cost-effective platform for infantry support against technologically inferior opponents. It is effective in this role but vulnerable in the battlespace of the Fifth Frontier War.

Deneb Light Grav Tank

TL	12
SKILL	Flyer (Grav)
AGILITY	+2
SPEED (CRUISE)	Fast (High)
RANGE (CRUISE)	—
CREW	3
PASSENGERS	—
CARGO	340kg
HULL	64
SHIPPING	16 tons
COST	MCr8.283
TRAITS	—

EQUIPMENT

Airlock, Autopilot (advanced), Anti-Missile System (advanced laser), Control Systems (advanced), Communications System (advanced, encrypted, increased range), Computer/3, Decoy Dispenser, Fire Extinguishers, Fusion Plant (advanced), Hostile Environment, Life Support (short term), Navigation System (improved), Reactive Armour (advanced), Sensors (advanced, hardened)

Autopilot (skill level)	3
Communications (range)	10,000km
Navigation (Navigation DM)	+4
Sensors (Electronics (sensors) DM)	+2
Camouflage (Recon DM)	-4
Stealth (Electronics (sensors) DM)	—

WEAPONS

Large Turret (heavy gauss cannon)
Small Turret (VRF gauss gun)

ARMOUR

Front	40 +30
Sides	36 +30
Rear	30 +30
Top	30 +30
Underside	28 +30



WEAPON	RANGE	DAMAGE	MAGAZINE	MAGAZINE COST	TRAITS	FIRE CONTROL
Heavy Gauss Cannon	3	2DD	60	Cr800	AP 15, Auto 2	+4
VRF Gauss Gun	1	4D	400	Cr1000	AP 5, Auto 8	+4

LIFT ARTILLERY REGIMENT

Artillery formations do not deploy alone under most circumstances. For all their immense firepower, artillery weapons are vulnerable to attack by enemies that can get close enough. Some can engage an enemy directly, which by ancient tradition is known as firing over open sights, but cost-effective artillery platforms do not carry heavy armour and may not be very manoeuvrable. Artillery units do tend to have good aerospace defences since the main threats they face are fast strikes from above and enemy artillery weapons.

An artillery battalion-equivalent is known as a regiment. This is a different usage of the term to that applied to administrative formations, which can cause some confusion but as artillery formations are often broken up and components attached to other forces the term is appropriate. More importantly it is traditional and the Imperial Army likes tradition.

The artillery company-equivalent is known as a battery. The term has been used for centuries, in various contexts and in multiple languages, to refer to a group of artillery weapons. However, the size of that group can vary enormously. Some militaries would consider three to six primitive cannon to be a battery, while others consider it to mean a company-sized unit. A single superheavy artillery piece might be considered a battery in some places, while somewhere else a 'battery' is a deployment and the force is known by a different designation altogether. The Imperial Army uses the term loosely but in general uses it to refer to a company-equivalent that contains mostly artillery weapons. A smaller unit might also be referred to as a battery under some circumstances.

Most Imperial Army field artillery battalions use a mix of rocket systems and mass driver cannon to deliver explosive and specialist warheads. Rocket systems are ideal for dumping large amounts of ordnance onto a target in minimum time but require a lengthy reload process before they can shoot again. Mass driver cannon cannot match this 'surge' capability but may have a higher sustained rate of fire. They are also capable of directly engaging an enemy, providing the unit with some defence, and can engage precise targets such as an enemy observation post located near the top of a tall building.

Lift artillery benefits from high mobility, enabling its elements to 'shoot and scoot' to avoid counter-battery fire. This mobility can bring with it a certain vulnerability if the unit is poorly or recklessly handled. Artillery

dashing forward to get into range of enemy positions may be intercepted by aerospace forces or ambushed by concealed hostiles. The ability to rush around must be tempered by an appropriate level of caution.

An artillery battalion will field a mix of the two types of field artillery used by the Imperial Army – 'rocket' and 'tube' artillery. Rocket artillery provides a powerful surge capability whilst mass driver guns can maintain a bombardment longer and engage in direct fire if necessary. This is common against mid-tech opponents, where the armour and mobility of the grav sleds carrying the weapons enable them to act as tank destroyers. More advanced enemy armour would make mincemeat out of artillery weapons used this way but the mass driver guns are still useful in engaging precise targets.

Composition of an artillery battalion can vary, although all use a system of headquarters, support company and three 'firing' companies referred to as batteries. In a field artillery battalion these will be two rocket artillery batteries and one tube artillery battery. Light artillery battalions are less common. These have two mortar batteries equipped with the same vehicles used in lift infantry battalions plus a tube artillery battery. Heavy artillery battalions are for the most part equipped with three batteries of meson artillery.

Field and heavy artillery battalions are intended to be deployed as a whole, usually at the brigade or division level. This means a lift infantry brigade will typically have a field artillery battalion attached to it while a division-sized force will have field artillery in its brigades and an artillery reserve composed of field and heavy artillery battalions grouped as a provisional brigade for administrative purposes. Light artillery battalions may deploy en masse but often their mortar batteries are broken off and assigned to provide close support for infantry formations while the battalion HQ and tube artillery battery are deployed together. This formation will often be assigned an assortment of troops to provide temporary administrative and command functions for orphaned and detached units.

HEADQUARTERS COMPANY

Infantry formations incorporate their support elements with the battalion headquarters. This is partly to do with the lower support requirement of an infantry formation and partly because infantry tends to operate in brigades which have their own support elements. Artillery battalions are more commonly deployed to join other formations which may or may not be equipped to fully support the artillery unit's needs.

Headquarters Element: The battalion headquarters is broadly similar to that of an infantry formation. It contains the commanding officer and executive officer, the senior battalion NCO, a group of staff officers and a security element equivalent to a lift infantry platoon. HQ vehicles include the command and communications variants of the standard grav APC. Vehicles are typically armed with aerospace defence weapons as they are not intended to engage in direct combat.

Forward Observation Platoon: The forward observation detachment is tasked with obtaining targeting data and correcting the aim of artillery weapons. Much of this can be accomplished by collating data from other formations in the network but an artillery force always has to be capable of obtaining its own targeting data. Data processing is handled by the headquarters element and passed to artillery vehicles, whereas the forward observation platoon gets close to the enemy to obtain first-hand data. On paper, the detachment has four observation vehicles based on a light grav sled such as the *Brize* class. In practice, one or more of these will be replaced by two or three militarised air/rafts.

Medical Platoon: An artillery unit is less likely to need casualty evacuation capabilities than an infantry force, so the provision is accordingly lower. The battalion will have a mobile aid station on a standard grav APC chassis, commanded by the battalion medical officer, plus two to three air/rafts which serve as ambulances.

Maintenance and Technical Platoon: An artillery formation requires a lot of technical support for its electronic equipment and specialist vehicles. It must also maintain the capability to recover and repair broken-down vehicles. The maintenance and technical detachment is equipped with a grav-mobile recovery/workshop vehicles a mobile technical workshop and two grav APCs which carry the unit's mechanics and technicians.

Service Platoon: The service platoon is similar to its equivalent in an infantry formation. It has three grav APCs, which are usually unarmed. One is set up as a field kitchen while the others carry personnel and robots necessary to keep the unit fed in the field.

Composite Defence Battery: An artillery unit is a high priority target for enemy aerospace forces. In addition to aerospace defence weapons mounted on its command APCs and aerospace defence vehicles accompanying them, an artillery unit has two medium-range aerospace defence vehicles and two nuclear damper equipped vehicles in its composite defence detachment. These

will be tied into the defence net at brigade and divisional level but remain under the control of the battalion's commanding officer. They cannot be pulled away to plug gaps in the net elsewhere without the unit commander's agreement. The composite defence battery is not a company-equivalent but as a self-contained artillery formation it is given the same title.

ARTILLERY BATTERY

An artillery company-equivalent consists of three 'firing' units, a command element and a support element. Artillery units require a large supply of munitions and therefore have a considerable amount of 'tail' dedicated to bringing up sufficient projectiles in time for the unit to commence firing. Typically the HQ and support element are deployed together at a reasonably safe location, with the firing elements dispersed around them.

Headquarters Element: The company headquarters consists of a command vehicle, an aerospace defence vehicle, a standard APC carrying an infantry section for local security and general tasks, and a reconnaissance vehicle such as a *Brize* light grav sled.

Support Element: The support element contains a command vehicle, an APC carrying security personnel and six to eight grav transports loaded with additional munitions. One or more of these vehicles may be dedicated to special weapons. This might be secure transport for nuclear weapons or a workshop supporting advanced drone operations. Depending on the deployment, the specialist munitions vehicle might carry a printing machine enabling the Imperial Army to spend millions of Credits littering the countryside with propaganda leaflets.

Firing Element: The composition of a firing element is the same whether the unit is equipped with mortars, mass driver guns or rocket launch systems. Three artillery grav sleds, one of them serving as the battery command post, are equipped with the unit's primary weapon. A fourth grav vehicle carries additional munitions and is often detached to dash back to the nearest supply dump and return with additional projectiles.

A rocket artillery unit will have an additional vehicle assigned to each launch unit. This carries an automated reloading system and some additional munitions. During protracted firing the reloader vehicle will be replenished by a vehicle from the support element, in turn feeding into the launcher. Even so, rocket artillery gets through projectiles faster than they can be reloaded.

In a meson artillery unit there are three 'firing' vehicles and a fire control vehicle which handles the complexities of delivering relativistic particles on the battlefield. Logistics are simpler but the power consumption of mobile meson guns is prodigious.

FIELD ARTILLERY REGIMENT

Headquarters Company

- Battalion Headquarters
- Forward Observation Platoon
- Medical Platoon
- Maintenance Platoon
- Service Platoon
- Composite Defence Battery

Rocket Artillery Battery x2

- Battery Headquarters
- Logistics Element
- Firing Element x3

Mass Driver Artillery Battery

- Battery Headquarters
- Logistics Element
- Firing Element x3

AEROSPACE DEFENCE REGIMENT

Like artillery, Imperial aerospace units use the term 'regiment' to describe their battalion-equivalents. Aerospace defence is divided into four broad areas of capability; point defence, area defence, theatre defence and planetary defence. In addition, last-ditch protection against missiles and projectiles is provided by close-in defence weapons.

Aerospace defence battalions can vary considerably in composition and capabilities. Some are permanent garrisons which operate and protect planetary defence installations. This is primarily the work of local forces but the Imperial Army will deploy permanent forces to fortress worlds to augment their own defences. A planetary defence battalion will include a lot of technicians and gunners who operate the primary anti-orbital weapon systems and a layered theatre, area and point defence setup intended to protect against attempts to disable the big guns by slipping smaller weapons past them. The battalion will also include security troops with emplaced heavy weapons sufficient to repulse a ground assault.

Field aerospace defence battalions are more common. They may be deployed en masse at the divisional level or broken up to provide capability to multiple brigades and detached formations. In this case, the battalion headquarters may be deployed as a spare command element responsible for a region away from the main force, or else used as a holding formation for attached forces.

An aerospace defence battalion is similar in composition to a field artillery battalion, although it has less need for forward observation elements. Support requirements are not quite as high, although missiles can be expended at an alarming rate in a high-intensity action. For this reason aerospace warfare battalions have five sub-elements; three 'firing' companies, a headquarters and a support and specialist company.

These battalions provide area and point aerospace defence plus some specialist functions. Theatre and planetary defence units are specialists in their field, although they have area and point defence systems for their own protection.

HEADQUARTERS COMPANY

The headquarters company of an aerospace warfare battalion has a higher percentage of officers and mid-level NCOs than an infantry formation. Most technical tasks come with a level of training and responsibility that requires a junior officer or an experienced sergeant.

Headquarters Element: The battalion headquarters has four vehicles. Two are command-variant APCs and the others are standard APCs carrying a small security and general-duties force. The latter will carry standard support weapons while the command vehicles have light aerospace defence weapons.

Medical Detachment: Medical requirements are similar to those of an artillery formation. The battalion will have a mobile aid station on a standard grav APC chassis, commanded by the battalion medical officer, plus two to three air/rafts which serve as ambulances.

Maintenance and Technical Detachment: Technical support requirements are high. The maintenance and technical detachment is equipped like an artillery formation, with a grav-mobile recovery/workshop vehicle, a mobile technical workshop and two grav APCs which carry the unit's mechanics and technicians.

Service Detachment: The service detachment is similar to its equivalent in an infantry formation. It has three grav APCs, which are usually unarmed. One is set up as a field kitchen while the others carry personnel and robots necessary to keep the unit fed in the field.

Security Detachment: The security detachment is, to all intents and purposes, a lift infantry platoon. It is usually broken up to protect the various batteries of the support and specialist company.

SUPPORT AND SPECIALIST COMPANY

The support and specialist company handles logistics and any specialist tasks the unit might have. Some field artillery formations routinely have tasks that include theatre reconnaissance and electronic warfare. The elements of this company are routinely broken up and sent to protect other formations or incorporated into composite forces.

Headquarters Element: The company headquarters consists of a command vehicle, a standard APC carrying an infantry section for local security and general tasks, and two electronic warfare vehicles. The company commander can expect to lose one of these as soon as a friendly formation needs additional electronic warfare capabilities.

Nuclear Defence Detachment: Aerospace warfare formations are high-priority targets and equipped with three nuclear damper vehicles plus a command APC tasked with tracking suspected nuclear threats and passing information about them on to other formations. Dampers provide a good defence against nuclear weapons but breaking the kill chain so that they are never launched is much better.

Theatre Reconnaissance Detachment: The theatre reconnaissance battery contains a command APC set up for information collation and analysis plus two vehicles capable of launching objects to high altitude and one carrying additional munitions. These vehicles can put up recon and comms satellites, giving the army its own planet-wide communications network, or can launch high-altitude, long-duration drones that loiter unobtrusively in the higher atmosphere. These fly above weather effects and can remain aloft for weeks or months in a standard or dense atmosphere.

Specialist Munitions Detachment: The specialist munitions battery contains a command vehicle, a vehicle capable of launching intermediate range ballistic missiles, a support vehicle carrying munitions

and a security team riding in a standard APC. Nuclear munitions might be used to engage incoming major aerospace threats, possibly eliminating a large enemy force with a nearby airburst or crippling assault landers coming down from orbit. Usually two specialist munitions elements are assigned to formations that have any at all.

Logistics Element: The battalion's logistics element will typically have six to eight grav transport vehicles, which may be escorted by APCs from the security element.

AREA AEROSPACE DEFENCE BATTERY

The area aerospace defence battery is set up to provide area defence. Typically one of the three 'firing' elements will be retained at battalion headquarters while the others are used to create aerospace defence concentrations elsewhere.

LIGHT AEROSPACE DEFENCE BATTERY

The light aerospace defence batteries are intended to provide point defence. As such they will often be broken up, with individual vehicles assigned to nearby friendly formations. Some of the batteries' assets will be retained to protect the battalion HQ, support elements and the area-defence battery.

Headquarters Element: The company headquarters consists of two command vehicles used by the commanding and executive officers plus two standard APCs each carrying an infantry section for local security and general tasks. The command vehicles will be armed with light anti-aerospace weapons.

Support Element: The support element contains a command vehicle, an APC carrying security personnel and four to six grav transports loaded with additional munitions if the unit is equipped with missile weapons. In those rare all-laser formations this element may be omitted and replaced with a couple of grav transports assigned to the battalion HQ.

Firing Element: The firing elements of an anti-aerospace formation are equipped with three grav APCs mounting point defence anti-aerospace weapons and a command/targeting vehicle. It is not uncommon for one or even two of the firing vehicles to be detached and assigned to protect nearby units, or for one or more entire firing elements to be detached. A battalion's paper strength is six firing elements, with 18 vehicles equipped with point defence anti-aerospace weapons in total. In practice, only a third to half of this strength is likely to be located near the unit's HQ at any given time.

AREA AEROSPACE DEFENCE BATTERY

The area-defence battery provides coverage over a wide area and will usually be concentrated close to the battalion HQ. 'Concentrated' in this context can be misleading; some vehicles may be as much as 25 kilometres away but this is still a concentration in anti-aerospace terms. Typically the area defence battery will disperse its vehicles in this manner, pairing an area and a point defence asset to create overlapping areas of coverage.

Headquarters Element: The company headquarters consists of two command vehicles used by the commanding and executive officers plus two standard APCs each carrying an infantry section for local security and general tasks. The command vehicles will be armed with light anti-aerospace weapons.

Support Element: The support element contains a command vehicle, an APC carrying security personnel and four to six grav transports loaded with additional munitions. These tend to be quite busy, flitting back and forth from supply dumps to the firing elements.

Firing Element: The firing elements of an area defence formation are equipped with three grav APCs mounting medium-range anti-aerospace weapons, plus

a command/targeting vehicle. Paper strength of the unit is nine vehicles, of which typically half to a third are assigned to nearby forces with the rest creating an anti-aerospace nexus around the battalion HQ.

CONCETTA ARTILLERY SLED

The *Concetta* class of artillery sled is built on the lower chassis of the *Torana* APC, with a large turret pillar towards the rear of what would be the carrying compartment. Atop this stands an IBS-150 gun-howitzer on an open mount. The weapon overhangs the rear of the chassis and can elevate to 70° and depress to -5°. This permits direct fire from a hull-down position, enabling the *Concetta* to act as a tank destroyer when facing minor threats.

The main gun has a rotary three-round magazine, reloaded automatically when the gun is in its level position. It is standard practice to fire three times in rapid succession then 'scoot' to another firing position while the gun is being reloaded. When firing, the vehicle is normally grounded and its stabilising jacks deployed. It is possible to fire on the move but stability is disrupted. With guided ammunition this is not much of a problem in terms of accuracy but can endanger a vehicle travelling fast close to the ground.

Internally the *Concetta* is quite different to the basic *Torana* design. The crew/driving compartment is larger, to accommodate a crew of four: commander, driver, gunner and technician. The latter may have to leave their seats and squeeze past the gun pillar to address any malfunctions. The rear of the carrying compartment houses ammunition and the notoriously 'hungry' autoloader system, well known for rewarding a technician who fixes a malfunction by trying to feed them into the gun when the autoloader restarts.

Protection is provided by a Rotella laser anti-missile system, electronic countermeasures and a decoy launcher. There is no dedicated anti-personnel weapon, although the anti-missile system is effective at short range if enemies somehow get close. Armour is slightly less than on a *Torana* APC, with performance otherwise comparable.

AEROSPACE DEFENCE REGIMENT

Headquarters Company

- Battalion Headquarters
- Medical Detachment
- Maintenance and Technical Detachment
- Service Detachment
- Security Detachment

Support and Specialist Company

- Company Headquarters
- Nuclear Defence Detachment
- Theatre Reconnaissance Detachment
- Specialist Munitions Detachment
- Logistics Element

Area Aerospace Defence Battery

- Battery Headquarters
- Battery Support Element
- Firing Element x3

Light Aerospace Defence Battery x2

- Battery Headquarters
- Battery Support Element
- Firing Element x3

Concetta Artillery Sled

TL	12
SKILL	Flyer (Grav)
AGILITY	+2
SPEED (CRUISE)	Fast (High)
RANGE (CRUISE)	6,000 (12,000)
CREW	4
PASSENGERS	—
CARGO	4.5 tons
HULL	80
SHIPPING	20 tons
COST	Cr8003000
TRAITS	—

EQUIPMENT

Airlock, Anti-Missile System (advanced laser), Autopilot (advanced), Communications System (advanced, encrypted, increased range), Computer/3, Control Systems (advanced), Decoy Dispenser, Fire Extinguishers, Hostile Environment, Life Support (short term), Navigation System (improved), Sensors (advanced, hardened)

Autopilot (skill level)	3
Communications (range)	10,000km
Navigation (Navigation DM)	+4
Sensors (Electronics (sensors) DM)	+2
Camouflage (Recon DM)	-4
Stealth (Electronics (sensors) DM)	—

WEAPONS

Fixed Mount (150mm mass driver gun howitzer)

ARMOUR

Front	32
Sides	28
Rear	24
Top	24
Underside	32



WEAPON	RANGE	DAMAGE	MAGAZINE	MAGAZINE COST	TRAITS	FIRE CONTROL
IBS(T)-150 150mm Mass Driver Gun Howitzer	40	1DD	3	Cr2500	Artillery, Blast 10	+4

ARMoured [GRAV TANK] SQUADRON

By long tradition, Imperial armoured battalions are known as squadrons, although in some other services the term refers to a smaller unit, and company-equivalents are termed troops. An armoured squadron consists of a headquarters element and three cavalry elements equipped with main battle tanks. All supporting elements are included in the headquarters element.

Armoured Squadrons may be attached to a lift infantry brigade but by preference they are grouped into armoured brigades which have the firepower to smash through most defences. Tanks alone cannot hold territory but they can drive enemy forces away or destroy them. Main battle tanks are armed with fusion guns which produce hard radiation when firing, necessitating protection for crewmembers and personnel operating nearby.

HEADQUARTERS TROOP

An armoured squadron will never operate alone, so can rely on the support of a brigade or higher formation. However, it does need to take with it sufficient support to keep its tanks operational in the field. The headquarters troop consists of:

Squadron Headquarters: The squadron headquarters consists of two command tanks used by the unit's commanding and executive officers, plus two aerospace defence variants of the same tank design. There is no security or medical element as the squadron will always be assigned to a higher formation which can protect its support elements. Squadron HQ will be in the field, fighting alongside the three main battle tank troops.

Armoured Reconnaissance Platoon: Each reconnaissance platoon consists of four light tanks which provide flank security when not ranging ahead of the main force.

Maintenance Platoon: The maintenance element is equipped with two grav-mobile recovery/workshop vehicles and two grav APCs which carry the unit's mechanics and technicians. These personnel are armed and can fight but typically remain out of direct contact with the enemy if at all possible. This is just about sufficient to keep the unit fighting in the short term. When assigned to an armoured brigade the squadron will receive additional support.

Logistics and Service Platoon: The logistics and service troop has eight grav APCs, which are usually unarmed. One is set up as a field kitchen while another carries the personnel and robots necessary to keep the unit fed in the field. The remainder of the vehicles are munitions and spares carriers.

ARMoured TROOP

An armoured troop is an all-tank formation. It consists of a headquarters platoon and three armoured platoons. Each consists of four main battle tanks and their crews. Each armoured troop can field 16 main battle tanks in a formation that is up to strength, backed up by the command and reconnaissance elements.

ARMoured SQUADRON

Headquarters Troop

- Squadron Headquarters
- Armoured Reconnaissance Platoon x2
- Maintenance Platoon
- Logistics and Service Platoon

Armoured Troop x3

- Troop Headquarters Platoon
- Armoured Platoon x3

BERGSTROM LIGHT GRAV TANK

Manufactured at TL15, the *Bergstrom* class is only 'light' compared to an Imperial MBT. It is intended to fulfil the armoured reconnaissance role in armoured formations and provide fire support to heavy forces. The *Bergstrom* is equipped with the same fusion gun-Z as full-scale MBTs and expensive to produce. It is highly mobile, making armoured reconnaissance units equipped with these vehicles useful as rapid-reaction formations.

The frontal armour of a *Bergstrom* can resist most weapons but is easily penetrated by the fusion guns of enemy MBTs. Nevertheless, it is a survivable platform which can mop the floor with the armoured vehicles fielded by TL9–11 powers. Reactive armour is not used as these tanks are not intended to face mid-tech opponents using high explosive armour piercing ammunition and can take hits from those vehicles they do not immediately destroy.

The aerospace defence version of the *Bergstrom* mounts a medium-range missile system instead of the fusion gun. The expense of fitting such weapons in a tank is offset by the reduced logistics burden

Bergstrom Light Grav Tank

TL	15
SKILL	Flyer (Grav)
AGILITY	+2
SPEED (CRUISE)	Very Fast (Fast)
RANGE (CRUISE)	—
CREW	3
PASSENGERS	—
CARGO	250kg
HULL	80
SHIPPING	20 tons
COST	MCr28.8
TRAITS	—

EQUIPMENT

Airlock, Autopilot (advanced), Anti-Missile System (advanced laser), Communications System (advanced, encrypted, increased range), Computer/3, Control Systems (advanced), Decoy Dispenser, Fire Extinguishers, Hostile Environment, Life Support (short term), Navigation System (advanced), Sensors (advanced, hardened)

Autopilot (skill level)	3
Communications (range)	10,000km
Navigation (Navigation DM)	+4
Sensors (Electronics (sensors) DM)	+2
Camouflage (Recon DM)	-4
Stealth (Electronics (sensors) DM)	—

WEAPONS

Large Turret (fusion gun-Z)
Small Turret (VRF gauss gun)

ARMOUR

Front	110
Sides	95
Rear	70
Top	70
Underside	70



WEAPON	RANGE	DAMAGE	MAGAZINE	MAGAZINE COST	TRAITS	FIRE CONTROL
Fusion Gun-Z	10	3DD	—	—	AP 30, Blast 30, Radiation	+4
VRF Gauss Gun	1	4D	400	Cr1000	AP 5, Auto 8	+4

imposed by using common chassis. Close-in defence is provided by a VRF gauss gun and a Rotella missile defence system, with decoys and electronic countermeasures available at need.

MAKAMDA MAIN BATTLE TANK

Named for a particularly vicious predator once common in Vilani space, the *Makamda*-class Main Battle Tank is now scheduled for replacement by a vehicle variously reported as *Trepida* or *Intrepid*. This tank is currently in late trials and will be manufactured at TL14 alongside the *Astrin* APC. In-service date is scheduled for 1109, although it remains unclear how this will be affected by the current conflict.

Large numbers of *Makamdas* have been constructed over the past decades and crews are generally satisfied with them. Deployment is usually in all-tank formations intended to steamroller any opposition. The only real problems with them are expense and the difficulty in maintaining the vehicle's advanced electronics and weapon systems.

Main armament is the proven fusion gun-Z, manufactured at TL15 and fitted to a turret containing a mix of TL12 and TL13 systems. With the same weapon fit as the much lighter *Bergstrom* and costing almost twice as much, the *Makamda* is slower but much more heavily armoured. It can resist hits from its own main weapon in the frontal and side arcs, although a clean hit perpendicular to the armour surface will penetrate.



Makamda Main Battle Tank

TL	13
SKILL	Flyer (Grav)
AGILITY	+2
SPEED (CRUISE)	High (Medium)
RANGE (CRUISE)	—
CREW	3
PASSENGERS	—
CARGO	1.25 tons
HULL	180
SHIPPING	45 tons
COST	MCr48.027
TRAITS	AFV

EQUIPMENT

Airlock, Autopilot (advanced), Anti-Missile System (advanced laser), Communications System (advanced, encrypted, increased range), Computer/3, Control Systems (advanced), Decoy Dispenser, Fire Extinguishers, Hostile Environment, Life Support (short term), Navigation System (advanced), Sensors (advanced, hardened)

Autopilot (skill level)	3
Communications (range)	10,000km
Navigation (Navigation DM)	+4
Sensors (Electronics (sensors) DM)	+2
Camouflage (Recon DM)	-4
Stealth (Electronics (sensors) DM)	—

WEAPONS

Large Turret (fusion gun-Z)
Small Turret (VRF gauss gun)

ARMOUR

Front	148
Sides	138
Rear	100
Top	100
Underside	110



WEAPON	RANGE	DAMAGE	MAGAZINE	MAGAZINE COST	TRAITS	FIRE CONTROL
Fusion Gun-Z	10	3DD	—	—	AP 30, Blast 30, Radiation	+4
VRF Gauss Gun	1	4D	400	Cr1000	AP 5, Auto 8	+4

RAPID INTERFACE BATTALION

Otherwise known as jump troops or jump infantry, rapid interface units are usually attached to a corps and either spearhead planetary assaults or act as a rapid-reaction force. RIBs are made up of battle dress-equipped infantry and represent the most potent concentration of force the Imperial Army can muster. Unfortunately they also require a great deal of logistical support and can only remain combat effective for a short time.

Used correctly, a RIB can secure the landing site for a much larger force or suppress enemy aerospace defences to allow vehicles and shuttles to land. Casualties are inevitable in such an aggressive role but the combination of speed and overwhelming firepower can offset this to some extent. If bogged down, a RIB will suffer badly. This typically happens when one is flung into a chaotic situation with inadequate planning – something that is likely when a force must react to a deteriorating situation.

RIBs rely heavily on the support of other units, other than in terms of maintaining and repairing their battle dress and heavy weapons. There is no dedicated logistics or service element; these functions will be provided by the higher formation or aboard transport ships. Nor are there aerospace defence or electronic warfare troops – RIBs have one job and are totally dedicated to it.

HEADQUARTERS AND SUPPORT COMPANY

The headquarters and support company has a small command staff who are equipped to drop with the fighting companies. There is a medical detachment which specialises in treating injuries to troopers who are still wearing their battle dress – or what is left of it – and getting them out of the armour once they are stabilised. The medical detachment's specialist equipment does not drop with the unit but remains with the higher formation to receive casualties, although most of the detachment's personnel have served with the drop troops as combat medics before moving into this role.

The HQ and support company also has maintenance and repair facilities for battle dress and fusion weapons. Most of the technicians and all the heavy equipment remain with the higher formation, although a detachment of battle dress techs drop with the fighting companies. Normally these and the combat medics are spread out through the fighting companies since there is rarely a safe location for the specialists to await being called upon. If parts of the target were safe, there would probably be no need for rapid interface troops to assault it.

JUMP INFANTRY COMPANY

Jump infantry units are organised much like the infantry component of a lift formation. The company headquarters platoon includes a heavy weapons detachment, equipped with missile launchers and other anti-armour/anti-aerospace weapons, including tripod-mounted battlefield lasers and VRF gauss guns. Even with battle dress these weapons are not as mobile as the rest of the force so are typically used to create a fire base or fallback point from which to support the rest of the company. The other three platoons are equipped with fusion guns or, if circumstances require a less radioactive solution, gauss rifles.

RAPID INTERFACE BATTALION

Headquarters and Support Company

- Battalion Headquarters
- Medical Detachment
- Maintenance Detachment

Jump Infantry Company x3

- Company Headquarters
- Heavy Weapons Detachment
- Jump Infantry Platoon x3

IMPERIAL ARMY INDEPENDENT BRIGADE (LIFT INFANTRY)

The brigade is the smallest full-capability formation likely to be fielded. Brigades are formed around a 'brigade core', which is a more or less permanent formation. When readying for deployment, a brigade is assigned its fighting units. These will likely remain attached to the brigade for the duration of the deployment, although sometimes a unit is rotated out to rest and refit or to undertake some urgent task. The standard composition of a lift infantry brigade is three lift infantry battalions and a lift artillery battalion plus a small armoured reconnaissance element.

Sometimes a brigade will gain additional units, creating a reinforced brigade, or be stripped of one of its lift infantry battalions. Higher commanders do not need to know the details of exactly how many lift infantry companies or mass driver guns the brigade has; they know that a brigade has a certain level of fighting power. Beyond that it is for the brigade's commander and personnel to make it work.

Provisional brigades are sometimes formed by throwing together whatever troops are available around as near an approximation of the brigade core as is possible. These are supposedly temporary formations but in some cases they become semi-permanent. For example, a force assigned to protect a minor world might be initially given a set of core units and a single lift infantry battalion, with other forces sent to join it as they become available. This provisional brigade will be the de facto military command for that entire world and may find itself coordinating a mess of mercenary units, small groups of noble huscarles and a severely damaged artillery battalion whose replacements have not yet arrived.

BRIGADE HEADQUARTERS

The brigade headquarters will consist of two command APCs with aerospace defence weaponry, two grav APCs carrying 'headquarters troops' and a pool of grav vehicles. These will include militarised air/rafts or grav cars and possibly light grav vehicles such as the *Brize* class. The HQ troops include administrative personnel as well as some 'spare' officers and senior NCOs.

A security and military police detachment is assigned to the headquarters. This is officially a reinforced platoon commanded by a major, with security, field and investigative sub-units. In practice, about half the personnel are trained military police. The remainder are ordinary soldiers who have been given some basic instruction in policing but mainly act as a security element for the headquarters. If a brigade is involved in peacekeeping operations this detachment will be expanded if possible and provide advice to other personnel in dealing with complex 'situations other than war'.

Additionally, a nuclear defence detachment will be assigned to the brigade headquarters. At least one of its three nuclear damper-equipped APCs will always be present, although the others may be detached to provide additional cover or to assist in cleaning up areas already hit by nuclear strikes.

MEDICAL COMPANY

The brigade medical company has grav trucks or G-carriers for transportation but is intended to set up a hospital in tents or any suitable buildings. It has a high proportion of officers but these are not in the chain

of command other than in regard to medical matters. The medical company is geared towards emergency surgery rather than long-term care, although in small deployments it may have to act as a full hospital.

The brigade's decontamination equipment is attached to the medical company and is under the overall command of the senior medical officer, as is the sanitation and hygiene detachment. Most of the equipment is transported in grav trucks or G-carriers and is set up in the field, although there are four emergency field decontamination vehicles which are built around a standard APC chassis.

FIELD ENGINEERING COMPANY

The field engineering company normally uses grav APCs for transportation and specialised vehicles for work. These include earthmovers and general engineering vehicles equipped with a heavy but short-ranged demolition gun. These are usually built on a tank chassis and are well enough armoured to undertake their tasks in the face of the enemy.

MAINTENANCE COMPANY

The maintenance company specialises in keeping vehicles, weapons and personal armour in operational condition. Most of its vehicles are grav trucks or G-carriers, although it will have four armoured recovery vehicles capable of retrieving a main battle tank if necessary.

COMPOSITE AEROSPACE DEFENCE BATTERY

The brigade will have a composite aerospace defence battery comprising an area defence element and two point defence elements plus a small command element. Ideally, these assets will come from an administrative formation which has been broken up to create brigade cores. Often, however, it is necessary to 'rob' aerospace defence units within the theatre to provide them.

SERVICE COMPANY

The brigade has an entire company of personnel assigned to food and welfare-related tasks. The majority of staff are cooks or kitchenbot technicians or else carry out supporting tasks such as cleaning and maintaining equipment. There is also a small VIP staff who muck in with everyone else in day-to-day operations but are capable of putting on a fine-dining experience for visitors.

LOGISTICS COMPANY

The brigade logistics company is subdivided into those who specialise in moving supplies and those who keep track of them. It has multiple vehicles, notably grav trucks and some G-carriers. At least some of the trucks will be very large bulk transports.

LIFT INFANTRY BRIGADE

Brigade Headquarters

- Brigade Headquarters Company
 - Security/Military Police Detachment
 - Nuclear Defence Detachment
- Medical Company
- Field Engineering Company
- Maintenance Company
- Composite Aerospace Defence Battery
- Service Company
- Logistics Company

Lift Infantry Battalion x3

- Headquarters Company
 - Battalion Headquarters Platoon
 - Recon/Scout Platoon
 - Medical Platoon
 - Maintenance Platoon
 - Service Platoon
- Lift Infantry Company x2
 - Company Headquarters Platoon
 - Rifle Platoon x3
- Support Company
 - Company Headquarters Platoon
 - Fire Support Platoon x3

Lift Artillery Regiment

- Headquarters Company
 - Battalion Headquarters
 - Forward Observation Platoon
 - Medical Platoon
 - Maintenance Platoon
 - Service Platoon
 - Composite Defence Battery
- Rocket Artillery Battery x2
 - Battery Headquarters
 - Logistics Element
 - Firing Element x3
- Mass Driver Artillery Battery
 - Battery Headquarters
 - Logistics Element
 - Firing Element x3

TEAMSTER LOGISTICS VEHICLE

The *Teamster* is an example of what are collectively termed G-carriers; armoured transports that can be adapted to a variety of roles. The *Teamster* is too large for combat applications but makes an excellent bulk transport for relatively safe areas. Weapons are not usually fitted, although the crew have their small arms for emergency defence.

The vehicle can be operated by a single person despite its size but is normally assigned a permanent crew of two. Both are qualified to pilot the *Teamster* and have had training in maintaining its systems. Two additional personnel, who may not be vehicle-qualified, are usually added to assist with loading and unloading operations. The spacious carrying compartment has semi-automated hoists for large items and an extendable conveyor belt for smaller ones. This is fed by an array of 'picker' arms coordinated by the crew. The carrying area can be dangerous during high-speed select and deliver operations.

A variant on the *Teamster* design has less carrying capacity but a more complex picker system and segregated stowage. This version is able to operate as a mobile warehouse, delivering small quantities of necessary items with great precision upon presentation of an authorisation code. In less troubled times these *Teamsters* are referred to as 'automalls' and carry mundane goods such as clothing, consumer electronics and cold beer. Even in wartime, some vehicles are retained in this role for morale purposes. To a forward-deployed soldier in an unpleasant location the arrival of an automall represents a real improvement in their quality of life. However, most *Teamsters* are filled with ammunition and spare parts rather than ice cream or the latest entertainment units.

The *Teamster* is fusion-powered and will often serve as a recharge point for other vehicles and equipment when not plying back and forth between supply bases and deployed units. There are no advanced electronics, although the control system is of a high standard to enable the vehicle's considerable bulk to be manoeuvred with precision.

Teamster Logistics Vehicle

TL	12
SKILL	Flyer (Grav)
AGILITY	+2
SPEED (CRUISE)	Fast (High)
RANGE (CRUISE)	—
CREW	4
PASSENGERS	—
CARGO	13.5 tons
HULL	200
SHIPPING	50 tons
COST	MCr14.327
TRAITS	—

EQUIPMENT

Airlock, Autopilot (advanced), Communications System (improved, encrypted), Control Systems (advanced), Crane (medium), Fire Extinguishers, Fusion Plant (advanced), Hostile Environment, Life Support (short term), Manipulator Arms (advanced) x6, Navigation System (improved), Refrigerator (20 Spaces), Sensors (improved)

Autopilot (skill level)	3
Communications (range)	10,000km
Navigation (Navigation DM)	+2
Sensors (Electronics (sensors) DM)	+1
Camouflage (Recon DM)	—
Stealth (Electronics (sensors) DM)	—

WEAPONS

—

ARMOUR

Front	24
Sides	24
Rear	16
Top	16
Underside	16



IMPERIAL ARMY

ARMoured BRIGADE

Although lift infantry is the most numerous component of the Imperial fighting forces, armoured formations account for almost a third of the brigades deployed. In addition, independent armoured reconnaissance formations, equipped with light grav tanks, are attached to divisions and higher formations as rapid-reaction and reconnaissance assets.

Where a lift infantry brigade is composed of infantry with artillery in support, an armoured brigade has some infantry but no artillery of its own. This is because armoured formations almost never deploy solo. An armoured brigade will be part of a division or corps and can call upon support from its parent formation. Some infantry will always be necessary, however. Tanks can destroy most enemies or chase them from the battle zone but infantry are needed to clean up the resulting mess.

An armoured brigade will consist of a headquarters squadron which contains sufficient support elements to keep the unit fighting, two grav tank squadrons and a light grav tank squadron plus a lift infantry battalion. Some formations have special terms for these infantry units, such as panzergrenadiers or Kikhammu, a Vilani term which translates as 'shielded cooperators'.

BRIGADE HEADQUARTERS

The brigade headquarters is similar to an infantry brigade HQ. It has two command APCs with aerospace defence weaponry, two grav APCs carrying headquarters troops and a pool of grav vehicles. An armoured brigade will have a smaller military police contingent than an infantry force as it is more likely to be able to rely on higher formations. A nuclear defence detachment will be available.

MEDICAL TROOP

The brigade medical troop is smaller than that of an infantry formation and has authority over the decontamination detachment. This has more vehicles than an infantry brigade and is set up mainly to remove radioactive and toxic materials from the outside of the unit's tanks.

FIELD WORKSHOP

The brigade's field workshop includes armoured recovery vehicles as well as repair cradles for main battle tanks. It has its own security detachment equivalent to a platoon of infantry who use militarised air/rafts for mobility.

COMPOSITE AEROSPACE DEFENCE BATTERY

An armoured brigade has similar anti-aerospace capabilities to an infantry force. It has an area defence element and two point defence elements plus a small command element.

SERVICE TROOP

An armoured brigade has less personnel than an infantry formation but they still need to be fed. The service troop answers to the brigade headquarters but may be broken up and sent wherever the component battalions are positioned if the need arises.

LOGISTICS TROOP

The brigade logistics company-equivalent is highly similar to that of an infantry brigade, although the specific items it moves are different. In particular, spares for TL15 tanks are more carefully guarded than boots intended for infantry personnel.

GRAV TANK SQUADRON

The main fighting strength of the brigade rests with the main battle tanks of its two armoured battalions. Each has a small armoured reconnaissance element of its own but relies for the most part on the brigade's light tank component for screening and flank security.

LIGHT GRAV TANK SQUADRON

The composition of a light grav tank squadron is more or less identical to that of an MBT squadron. It is equipped with light tanks and normally operates either as a reconnaissance element or on the flanks. Some commanders pair a light tank troop with a lift infantry troop to create battlegroups while others prefer to keep the armour concentrated.

LIFT INFANTRY BATTALION

The brigade will have a lift infantry component of some kind. Officially, this is supposed to be a complete battalion but in practice the unit may be a composite of whatever troops are available. It is not uncommon to

find armoured brigades with a grossly understrength infantry component, shored up with combat engineers or provisional units cobbled together from stragglers and small groups of replacement personnel. The service and administrative components of some brigades have been 'combed out' for a few additional infantry soldiers so many times that the system is on the verge of collapse.

ARMOURED BRIGADE

Brigade Headquarters

- Medical Troop
- Field Workshop
- Aerospace Defence Battery
- Service Troop
- Logistics Troop

Armoured Squadron x2

- Headquarters Troop
- Grav Tank Troop x3

Light Armoured Squadron

- Headquarters Troop
- Light Grav Tank Troop x3

Lift Infantry Battalion

- Headquarters Company
- Lift Infantry Company x3

COMPOSITE AEROSPACE WARFARE BRIGADE

Aerospace defence brigades may be assigned to the corps or army level to provide theatre-wide defence against above-the-horizon threats. They tend to be either field units, with all their weaponry aboard vehicles, or mixed formations staffing emplaced weapons and providing protection for them against ground-level attack. Aerospace warfare formations, on the other hand, include vehicles designed to contest local airspace and undertake strikes against distant targets.

An aerospace warfare brigade is built around a similar headquarters/support formation to other brigades, although with additional security troops attached. These are infantry, with a few light vehicles for mobility when necessary. There is no armoured or artillery component, although an entire aerospace defence battalion is part of the brigade's standard establishment. The fighting units are termed wings and are battalion-equivalents. Each fighting wing has a flying component and a ground component, all company-equivalents and known as squadrons. Vehicles are organised into flights of four.

This brigade uses *Mongoose* attack speeders and *Alligator* grav gunships. The speeders are, as the name suggests, suited to interception and aerospace-superiority operations whilst the gunships are better at ground attack and support missions. Both types function much like aircraft but can hover, turn in place and make vertical take-offs and landings.

A composite aerospace warfare brigade of this sort offers a range of options to its overall commander including aerospace denial and rapidly available fire support for ground troops. It could also be reinforced with additional infantry and artillery and set up as a bastion, adding its aerospace defence weapons to the threats facing enemies penetrating the local disputed zone.

COMPOSITE AEROSPACE WARFARE BRIGADE

Brigade Headquarters

- Security Company (Light Infantry)
- Medical Company
- Heavy Workshop Company
- Composite Aerospace Defence Battery
- Service Company
- Logistics Company
- Nuclear Defence Detachment

Speeder Wing

- Wing Headquarters
- Wing Workshop Squadron
- Speeder Squadron x3
 - Squadron Command Detachment
 - Squadron Technical Detachment
 - Squadron Security Detachment
 - Speeder Flight x3

Gunship Wing x2

- Wing Headquarters
- Wing Workshop Squadron
- Gunship Squadron x3
 - Squadron Command Detachment
 - Squadron Technical Detachment
 - Squadron Security Detachment
 - Gunship Flight x3

Composite Aerospace Defence Battery

- Battery Headquarters
- Battery Support Element
- Point Defence (light aerospace defence) Element x2
- Area Defence Element

MONGOOSE ATTACK SPEEDER

The *Mongoose* class attack speeder is designed for anti-aerospace operations. It is a single-seat grav vehicle, streamlined and lightly armoured. Its primary armament is a laser cannon carried on a conformal fixed mount under the fuselage, with capacity for two missiles alongside it on fixed pylons. These may be anti-armour or anti-air types depending on the mission, or may be omitted to reduce drag.

A fusion power plant takes up most of the available space within the vehicle but gives unlimited range and firepower for the laser weapon. The hull can withstand hits from most anti-aerospace weapons but the primary defensive asset of the *Mongoose* is its speed and agility. Whether intercepting enemy forces dropping through atmosphere or flying top cover for a wing of gunships, the *Mongoose* class gets firepower to the target in minimum time. However, that firepower is somewhat limited. This is not a drawback when lasering TL7 jet fighters out of the sky but may be a liability in the present conflict.

ALLIGATOR GRAV GUNSHIP

The *Alligator* class gunship is in some ways similar to the 'flying tank' concept explored with some mid-tech helicopter gunship designs and is one of the few vehicles to successfully implement a multi-turret design. The vehicle has a fusion power plant and can in theory operate in low orbit, although gunships usually stay close to ground cover.

Primary armament is a heavy gauss cannon mounted atop the hull and unprotected by armour. This configuration allows the gunship to hide hull-down behind cover and snipe at opponents but requires the vehicle to tilt if its main weapon is to be brought to bear on targets at a lower altitude. Two VRF gauss guns are mounted on small turrets on the side of the hull and another under the chin. The side weapons can fire upwards and all three can sweep the ground below.

Armour is heavy, enabling the *Alligator* to engage in direct combat with most opponents but this vehicle is intended for fire support against enemy positions or light vehicles rather than being used as a tank-substitute. Units used to battling mid-tech foes might forget this to their cost.



Moongoose Attack Speeder

TL	12
SKILL	Flyer (Grav)
AGILITY	+4
SPEED (CRUISE)	Very Fast (Fast)
RANGE (CRUISE)	—
CREW	1
PASSENGERS	—
CARGO	190kg
HULL	40
SHIPPING	10 tons
COST	MCr4.172
TRAITS	Streamlined

EQUIPMENT

Autopilot (advanced), Communications System (advanced, encrypted, increased range), Computer/3, Control Systems (advanced), Fire Extinguishers, Life Support (short term), Navigation System (improved), Sensors (advanced, hardened), Vacuum Protection

Autopilot (skill level)	3
Communications (range)	10,000km
Navigation (Navigation DM)	+4
Sensors (Electronics (sensors) DM)	+2
Camouflage (Recon DM)	—
Stealth (Electronics (sensors) DM)	—

WEAPONS

Fixed Mount (light laser cannon)
Fixed Mounts (missile) x2

ARMOUR

Front	32
Sides	32
Rear	32
Top	32
Underside	32



WEAPON	RANGE	DAMAGE	MAGAZINE	MAGAZINE COST	TRAITS	FIRE CONTROL
Light Laser Cannon	2	8D	—	—	AP 5	+4

Alligator Grav Gunship

TL	12
SKILL	Flyer (Grav)
AGILITY	+2
SPEED (CRUISE)	High (Medium)
RANGE (CRUISE)	—
CREW	3
PASSENGERS	—
CARGO	—
HULL	80
SHIPPING	20 tons
COST	MCr16.522
TRAITS	AFV

EQUIPMENT

Airlock, Anti-Missile System (advanced laser), Autopilot (advanced), Communications System (advanced, encrypted, increased range), Computer/3, Control Systems (advanced), Decoy Dispenser, Fire Extinguishers, Hostile Environment, Life Support (short term), Navigation System (improved), Sensors (advanced, hardened), Vacuum Protection

Autopilot (skill level)	3
Communications (range)	10,000km
Navigation (Navigation DM)	+4
Sensors (Electronics (sensors) DM)	+2
Camouflage (Recon DM)	-4
Stealth (Electronics (sensors) DM)	—

WEAPONS

Fixed Mount (heavy gauss cannon)
Small Turrets (VRF gauss gun) x3

ARMOUR

Front	88
Sides	86
Rear	76
Top	86
Underside	86



WEAPON	RANGE	DAMAGE	MAGAZINE	MAGAZINE COST	TRAITS	FIRE CONTROL
Heavy Gauss Cannon	3	2DD	60	800	AP 15, Auto 2	+4
VRF Gauss Gun	1	4D	400	Cr1000	AP 5, Auto 8	+4

IMPERIAL ARMY DIVISION [LIFT INFANTRY]

Army brigades are grouped into divisions or provisional divisions. The distinction is that a 'real' division matches a standard establishment, more or less, while a provisional division is made up of the forces available at the time or is a mission-tailored formation. In a major theatre of war, with multiple divisions, corps or even armies deployed it will be possible to set out forces according to the standard model. This has been developed over many years to obtain the maximum fighting capability from the units within them. On the other hand, a lesser theatre might merit a division-sized force but this will need to include significant aerospace forces and other units not normally found in a standard lift infantry division.

The lift infantry division is the most common major combat force deployed by the Imperial Army, and can be used as a model to base other formations upon. It consists of three combat brigades plus a divisional artillery brigade, with support elements grouped within the division headquarters/support brigade. An entire lift infantry battalion is included within the headquarters brigade, providing security and acting as a reserve. It is complemented by an armoured reconnaissance battalion whose light tanks support the combat brigades or form a rapid-reaction force when not engaging in reconnaissance operations.

LIFT INFANTRY DIVISION

Division Headquarters/Support Brigade

- Division Headquarters
- Lift Infantry Battalion
- Medical Battalion
- Maintenance Battalion
- Logistics Battalion
- Field Engineering Battalion
- Service Battalion

Lift Infantry Brigade x3

- Brigade Headquarters
- Lift Infantry Battalion x3
- Lift Artillery Battalion

Divisional Artillery Reserve

- Artillery Reserve Headquarters
- Light Artillery Battery
- Field Artillery Battery x2
- Aerospace Defence Battery

By tradition, the artillery brigade assigned to a division is known as the divisional artillery reserve. It is a composite formation with three artillery battalions usually one light artillery and two field artillery – and an aerospace defence battalion. Heavy artillery is rarely assigned at the divisional level. It is more commonly concentrated in specialist artillery formation at the corps level.

IMPERIAL ARMY DIVISION [ARMoured]

Armoured divisions are the mighty sledgehammer with which the enemy's strong places are cracked open. They are not intended to hold ground, although a good counterattack can be an effective defence. Armoured divisions are intended to go to where the enemy is and cause destruction. Armoured units are trained to exploit any situation, breaking into defended zones to attack command and logistics assets or to relentlessly pursue retreating enemies.

This does not mean armoured units are simply flung straight into the enemy's defences or meet an advance head-on. Instead they make spoiling attacks to disrupt an enemy offensive and attempt to strike the flanks rather than the enemy's heaviest units. Armoured formations are widely seen as the 'arm of decision', the force that shatters the enemy and wins the battle, but are best used as part of an all-arms operation.

For example, a deep strike by an armoured division may severely disrupt the enemy and eliminate their main aerospace defence concentration, allowing infantry and artillery to apply pressure to the enemy's front units and open the way for an assault from orbit directly on the enemy's main base. Having retreated and regrouped the tanks re-enter the fray as the remnants of the enemy begin to retire from their positions, beginning a pursuit that will maximise the effects of the victory.

An armoured division is built around a similar core to a lift infantry force but will possess three armoured brigades supported by a lift infantry brigade. Each of the armoured brigades will be composed of one squadron of light tanks and two squadrons of main battle tanks. The light units will often be broken up to provide screening and flank security forces or sent to reinforce the lift infantry component, so each brigade is likely to go into action with a force of two main battle tank squadrons. Aerospace defences are normally light, as armoured divisions are always deployed as part of a larger formation.

ARMoured DIVISION

Division Headquarters/Support Brigade

- Division Headquarters
- Lift Infantry Battalion
- Medical Battalion
- Maintenance Battalion
- Logistics Battalion
- Field Engineering Battalion
- Service Battalion
- Composite Aerospace Defence Battery

Armoured Brigade x3

- Brigade Headquarters
- Light Armoured Squadron
- Armoured Squadron x2

Lift Infantry Brigade

- Brigade Headquarters
- Lift Infantry Battalion x3

OTHER FORMATIONS

No military organisation ever matches its intended ('paper') strength or has the exact equipment and personnel it was planned to possess. Formations as large as a division are likely to start the war close to their intended establishment, but larger groupings may exist as placeholders unless they are close to an expected trouble spot. The Imperial forces deployed somewhere like Jewell will be organised into corps and armies even in peacetime, but those deep within Imperial space in safe areas will be at a lower state of readiness for the most part. Corps and armies will be built as needed.

In the Imperial Army a corps will have at least two divisions or division-equivalents, and may contain up to six. There will in addition be whatever attached forces are deemed necessary to the mission. Larger forces will be subdivided into two or more corps and designated an army. Where possible, the corps within an army will be specialised or at least tailored to a particular mission, although geographical factors may also apply. For example, an army might contain a corps dedicated to ground combat and a smaller one tasked with aerospace and orbital defence, with a third corps assigned to protect a distant but important part of the mainworld.

Corps and armies have no set composition. Nor do they always receive the type of units they want or need. The same applies at a lower level of organisation; a division might be sent extra artillery rather than one of its lift

infantry brigades if this seems like a better force mix. More commonly, it will be short of some of its troops and will just have to get the job done with what it has.

The converse of this is the 'reinforced' unit, which can be anything from a platoon to a division. Reinforced in this context means that the unit has extra troops, usually of a different kind to its main composition. The presence of an extra infantry battalion in a lift infantry division will not qualify for a reinforced designation but adding a tank squadron and a couple of artillery battalions might.

THE IMPERIAL CORPS OF RANGERS

The Corps of Rangers, better known to the public as the Sylean Rangers, can trace its origins all the way back to the formation of the Third Imperium, when a force of specialists was raised on Sylea to undertake elite reconnaissance and covert-warfare missions. The Rangers are recruited from army soldiers and it is part of the army but with its own separate identity. The term 'corps' in this case is a different usage to the formation title and refers to all Rangers in Imperial service. Officially, there are one or two battalions of Rangers in each sector but troubled areas have a greater force.

It is rare for an entire Ranger battalion to deploy en masse. Battalions serve mainly as administrative formations with field units formed as necessary. The typical 10-soldier section used by the regular elements of the Imperial Army is retained unless there is some circumstance requiring a change, with platoons and companies built as needed. However, the Rangers have a much higher proportion of junior officers and senior NCOs than the army.

The typical Ranger mission requires stealth and subtlety, at least most of the time. Rangers undertake long-range reconnaissance, slip onto planets to guide invasion forces in, train irregular forces to resist occupation or generally cause trouble, and seize critical targets that must be taken undamaged. They are deadly in a straight fight but this is a waste of their capabilities.

Rangers will use battle dress when it is appropriate but more commonly engage in sabotage and pinpoint raids where lighter equipment is more suitable. They will be assigned to local commands at the corps or army level for the most part, and may not even be noticed by their regular-army comrades under most conditions. This suits the Rangers, as they would prefer no-one even knew they were there.



THE IMPERIAL MARINE CORPS

The Imperial Marine Corps contributes mainly to the naval war, typically with small detachments of ship's troops. Marines also guard naval installations where they provide a last line of defence against an assault. More commonly they prevent sabotage attempts. These detachments are created by breaking up marine battalions into companies, platoons and sections. A battalion may spend several years on a 'ship's troops' footing before switching to warfighting configuration. This requires recalling all the detachments and conducting additional training before deployment which is always a lengthy task. However, the alternative would be for a given battalion to be permanently assigned to 'troops' or 'warfighting' duty which would effectively create two separate marine corps. Typically a battalion on troops duty will break up two or three of its companies, with at least one remaining intact and assigned to a larger vessel or base.

For warfighting operations, marine forces may be slotted into an army formation at the appropriate level. A brigade commander might be assigned a company of marines or even a whole formed battalion. Although these personnel have different training and equipment to the army they do practice joint operations and will be more than able to pull their weight if the commander finds a suitable role for them. Since they train extensively for the assault role, marine units will be preferred if an attack is to be led.

Marines are administratively grouped into regiments, just like the Imperial Army. Most are 'line' regiments, composed of marine infantry battalions and support formations. The regiment will never deploy as a whole, although a marine brigade might be formed entirely from infantry and support units drawn from the same regiment. More commonly a marine deployment takes the form of a tailored task force. A marine regiment will have three task force headquarters on strength, of which one may be deployed as a forward administrative apparatus for units on ship's troops duty.

Each marine regiment also has a transport and logistics element and specialist elements including combat engineers, snipers and medical units. A small grav cavalry complement is available to line marine regiments but grav armour is mostly concentrated in marine armoured regiments. Aerospace warfare regiments also exist but these are more likely to be encountered as part of a navy operation than fighting alongside the Imperial Army.

Marine formations higher than a battalion are uncommon and marine battalions are likely to be slotted into army brigades if a larger force is required. They may also provide the infantry component of a provisional force, with specialists coming from army units. If larger formations of marines are to be deployed they will be assembled on a case-by-case basis and will generally conform to the model used by the Imperial Army.

THE ARMIES OF THE ZHODANI CONSULATE

The Zhodani Consulate is a very different place to the Imperium. In a military sense the most important difference is the degree of unity and standardisation. Both societies have a strong ruling class, and both consider those rulers to be nobles who are somehow above the common masses, but beneath the surface the differences begin to appear.

Imperial society is characterised by wealth and economic power whilst the Consulate considers these less important than psionic ability. This in turn means that the Consulate does not experience the economic free-for-all that characterises Imperial politics. To put that slightly differently: gaining power in the Imperium requires accumulating wealth so nobles may put their own considerations ahead of those of the Imperium as a whole.

In Zhodani society, the situation is different. Self-interest is still a real factor but there is relatively little to gain from manipulating the military procurement process in order to obtain a lucrative contract. Central control is stronger and society on the whole more unified than in the Imperium, meaning there is less need to worry about revolts or insurgencies. These still can happen but overall social control in the Consulate allows a smaller army to be fielded – and one tailored to defeating external threats rather than mid-tech rebellions.

As a result the Zhodani military is on average better suited to fighting the Fifth Frontier War than the Imperials. While smaller it is equipped at a uniform TL14 and trains to fight a major war rather than acting as an internal security force. Equipment is more standardised, as is training. Conversely, unit organisation is much more fluid than in Imperial service.

Zhodani personnel are encouraged to feel loyalty to the Consulate and its people rather than to a particular regiment or arm of service. Soldiers know they will move between units and are expected to be resigned to it. If a soldier is obviously underperforming in the new unit they may be offered training to assist in the transition but can usually expect to go back to their old 'home' as soon as it is possible. In the meantime they are required to do their best.

This two-way street of expectations is an important characteristic of the Zhodani armed forces. Soldiers know there is a reason for everything that happens and trust their superiors to do what is best for the Consulate. At the same time they can expect their superiors to treat them fairly. There is less cynicism and mistrust of high command in the Zhodani military than elsewhere, although outsiders credit this more to social manipulation than integrity. If the bond of trust were to be broken the morale of the army would likely collapse.

ZHODANI DOCTRINE

As with other military forces, the Zhodani Consulate has developed a doctrine that enables large numbers of people to be wielded as an effective whole. The ground and space forces are more closely related than in the Imperium, and commanders of one are expected to possess a working knowledge of how the other operates. It is uncommon for personnel to move between the ground and space forces but much of their equipment is common so technical experts might be reassigned to cover gaps caused by casualties or other circumstances.

Whereas the navy has in recent years moved towards a 'one and three' model for its battle squadrons, thereby putting more spinal mounts into action for the same tonnage of ships and number of crewmembers, the army retains its traditional 'system of fives'. This is largely misunderstood by outsiders, who do not always comprehend that five is a noun as well as a number. Zhodani organisation is relatively loose, with personnel moving between units on a short or long-term basis as needed.

The basic building-block for most formations is the Team, in the sense that a group of soldiers with a common task is a team without that meaning any specific number or type of equipment. The lowest level of leadership in the Zhodani military is 'leader of five'. However, 'five' in this context translates as 'a handful' and can actually mean three to seven. The next rank up is 'leader of ten', with connotations of 'leader of a team of around ten soldiers'.

The term Team is applied to all small units – squad and section equivalents – and the level of leader assigned depends on the size of the team. A Team of three to seven soldiers will have a Leader of Five in charge and a larger Team will be led by a Leader of Ten. This gives a basic organisation of two elements, with the Leader of Ten in overall control and the Leader of Five commanding the ‘junior’ element. Where two Leaders of Five are operating together the more senior is given the courtesy title of Leader of Ten and automatically takes charge. All personnel are expected to accept this as the right and proper order of things. Serious resentment is rare and those who disrupt the process are helped to understand how important it is.

At first glance, the organisation of a Team seems very similar to that of an Imperial section. The same number of personnel are involved and there are two primary elements. However, the Imperial section is actually two permanent squads of four plus a command element consisting of the section leader and designated grenadier whereas the Zhodani equivalent is two elements each of three to seven soldiers, which may pass personnel back and forth at need. This means that – in theory at least – a Zhodani section-equivalent might have 12–14 personnel and its sub-elements may be enlarged or shrunk. In addition to providing greater flexibility, this makes it difficult for an opponent to be sure of the unit’s strength.

Two or more Teams form a Group, which is the lowest formation to be assigned an officer. The commander is known as an Officer of Twenty, which is often taken to imply that a Group contains four squads of five neatly arranged as two tens. In practice, a Group will typically have 16–24 personnel. If a Group is not led by an officer it will have a Leader of Twenty, a non-commissioned officer equivalent to an Imperial Staff Sergeant.

It is easy to think of a Group as a weak platoon, although the equivalency is not perfect. One of the key differences is level of responsibility. Where the Imperium uses a combat style in which operations are ‘pushed’ by senior commanders, the Consulate has a front-led fighting style. Once an operation is in motion, junior leaders are expected to make intelligent decisions about what to do for the best and more senior commanders then funnel support to them. This enables the Zhodani war machine to change direction more readily and exploit opportunities that might be lost to a less reactive force.

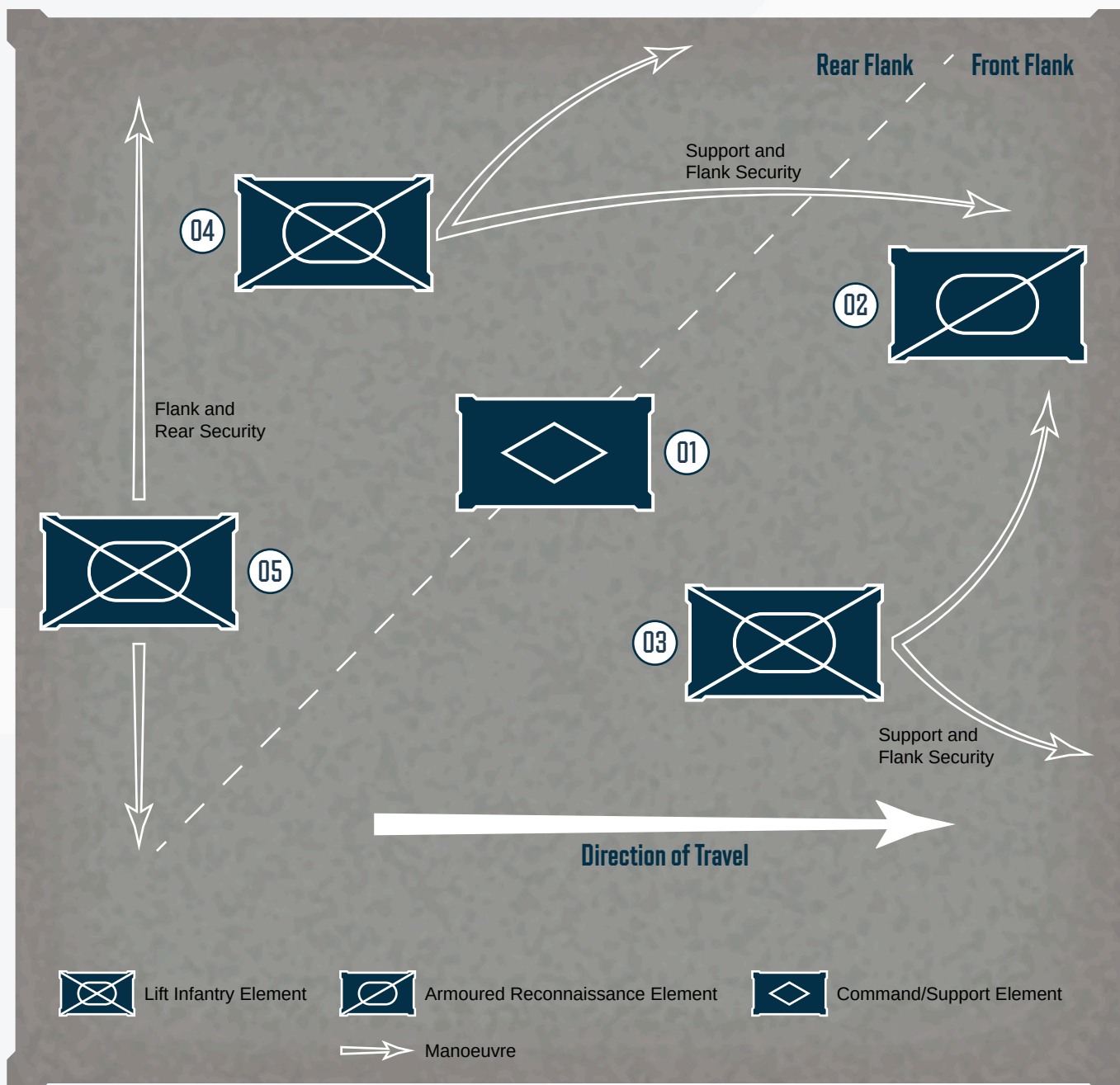
The Zhodani mode of warfare requires intelligent and highly competent junior leaders who have a better grasp of the ‘big picture’ than their Imperial counterparts. This is aided rather than hindered by the social stratification of the Consulate’s society. An Intendent will never rise above junior-officer rank, and a Prole will never be an officer, but they are more likely to reach their level of greatest competence and stay there. Junior as their rank may be they are – and they know they are – trusted to make good decisions in the face of the enemy.

Above the level of a Group is a Detachment, which will normally be formed from two Groups and some additional troops and has a nominal strength of 50 personnel. A Detachment is commanded by an Officer of Fifty and is the other candidate for a platoon-equivalent. The Detachment is the lowest level of organisation at which the ‘system of five’ becomes significant. It will normally take the form of four ‘contact’ elements and one command/support element.

The Zhodani equivalent of a company is known as a Squadron. Since a Squadron is commanded by an Officer of One Hundred, it is easy to assume that a Squadron numbers 100 soldiers neatly organised into ten Tens. However, in practice a Squadron will normally have two Detachments plus some command and support troops, which typically means a strength of 100–120 effectives or perhaps more. The Zhodani equivalent to an Imperial battalion is the Groupment, which nominally contains 500 soldiers or an equivalent amount of hardware. A Groupment is commanded by an Officer of Five Hundred who is equivalent to an Imperial Lieutenant-Colonel.

A Groupment can be considered the equivalent of an Imperial battalion, although there are some significant differences. The Zhodani approach often integrates combined-arms at a lower level, so what is nominally a lift rifle Groupment might have its own artillery or armoured support. Similarly, the Consulate prefers to use more and smaller sub-units than most other militaries so a force that might be marked on the battle plot as a lift infantry battalion might actually be weaker than this would seem to indicate.

A force consisting of five elements is advancing through potentially hostile terrain. Its support assets, mainly artillery, are grouped in the centre of the formation (1), with an armoured reconnaissance element (2) leading the way. This is paired with a left infantry element (3) to create the ‘front flank’.

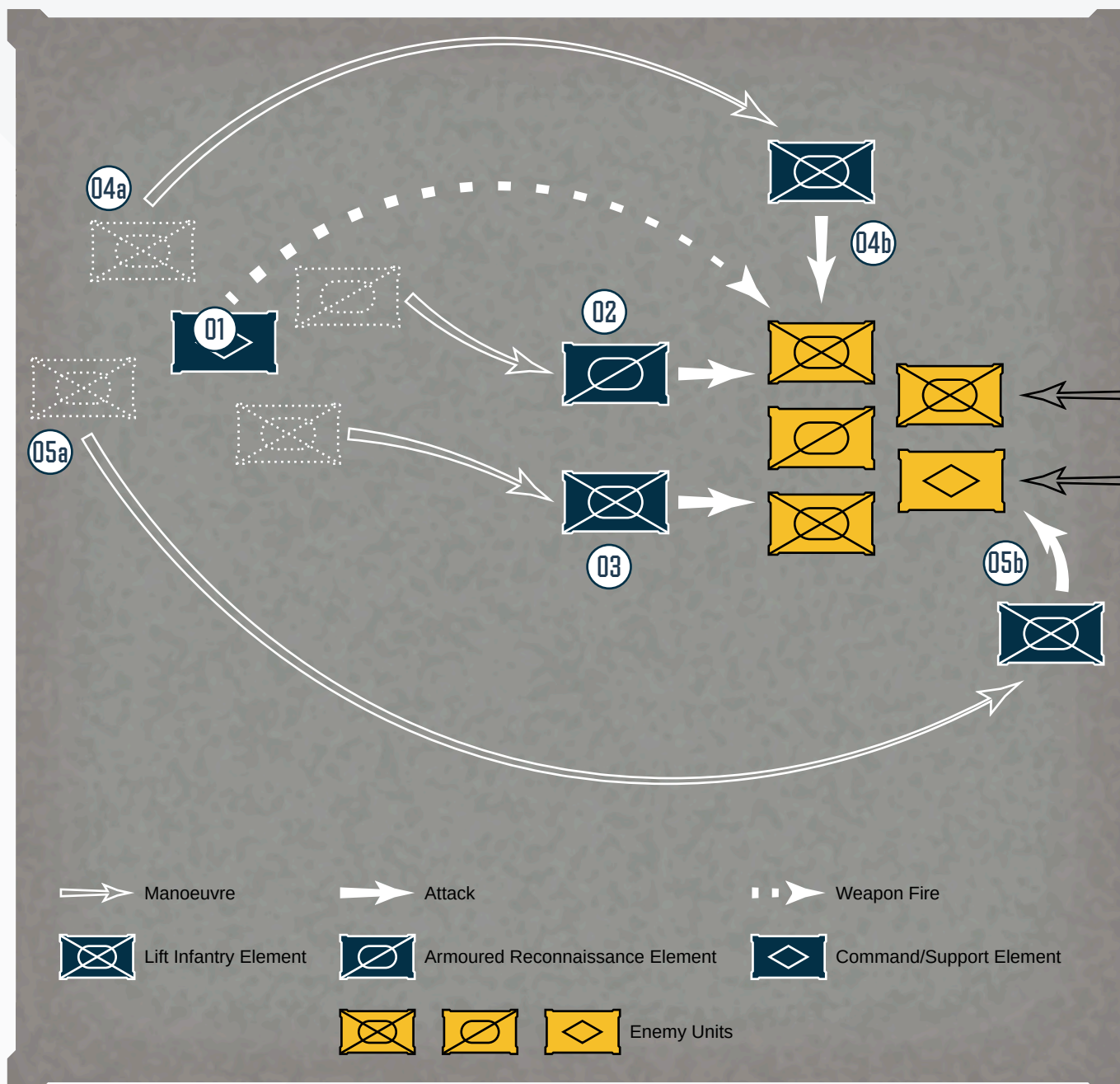


At first contact with the enemy, the front flank lift infantry element will advance to support the armoured recon unit or detach some of its troops to join it. The remainder will provide flank security.

To the left of the support group and to its rear are two more lift infantry elements, creating the 'rear flank'. Depending on circumstances, the left-flank unit (4) may swing out onto the enemy's flank or send troops to assist the forward elements. The rearmost element will spread out to provide flank and rear security if necessary but will often be called forward to assist the main attack.

Upon contact with the enemy the command element (1) halts and provides support with whatever means it has. The 'front flank' units (2) and (3) move up and engage the enemy, and are soon joined by another lift infantry element (4a) which moves into contact with the enemy (4b). The rear element (5a) sweeps around the enemy's flank and applies pressure to their rear (5b).

This manoeuvre can be applied in any direction, with the nearest units making initial contact and the others advancing towards the threat.



COMBINED ARMS AND WARBOT INTEGRATION

The Zhodani military makes extensive use of armed robots, although for the most part they are employed in a similar way to armed drones. Each warbot has a dedicated handler who maintains the 'bot and directs it in combat. This close cooperation with humans is mostly due to ethical considerations rather than worries the robot will 'go Frankenstein' as the Imperials refer to it.

The question is one of decision points. A soldier who makes the decision to pull a weapon's trigger is zero decision points away from the harm the projectile causes. Even so, a lot can go wrong between the decision to shoot and the projectile's impact. The chances of a tragedy increase with the number of decision points between the operator and the weapon's effects.

For example, if a guided missile is launched by human command but makes its own decisions about how to approach and hit the target there is relatively little chance of it killing innocents or noncombatants due to a faulty

targeting decision. It can still happen, such as if someone moves into the weapon's effect zone or their presence was not accounted for at the time of firing. If this was a loitering weapon given autonomy to select a suitable target and then decide how to engage it there are two decision points and therefore two opportunities for an unintended consequence. Giving a warbot autonomy to enter a combat zone, select its own targets and decide whether to engage them represents multiple decision points between the action and a responsible person.

The Zhodani Consulate considers this presents an ethical problem, which it attempts to solve by placing a human handler back in the loop. Zhodani warbots are capable of fully autonomous operations and are sometimes turned loose to cause mayhem, but always within a strictly defined set of parameters and never without a strong justification. Most commonly, warbots are treated in a similar manner to combat-trained animals. They operate in partnership with a human and are effectively mentored by their handler.

Infantry warbots, armed with a light support weapon, are integrated at the company level as fire support platforms. Current doctrine calls for two 'bots per company, assigned to the company command unit and under the close direction of its commanding officer. Handlers normally remain with the company HQ as additional infantry soldiers while their warbots might be out accompanying a patrol or supporting one of the contact elements.

Specialist assault 'bots are deployed in larger concentrations, effectively forming an entire contact element equivalent to a Group, with their handlers forming another Group within the same formation. These units are highly trained and while losses among the assaultbots are inevitable an experienced handler is a significant investment. Only in the most desperate circumstances would handlers be used as regular infantry, although they do sometimes have to guard the unit HQ and will fight if attacked.

Larger warbots, essentially robotic vehicles, are integrated into higher formations as fire support and aerospace defence platforms. Their handlers will be attached to the unit's headquarters, directing their warbots as ordered by their commander. Warbots armed with anti-aerospace weapons are normally authorised to auto-respond to a specific range of threats.

Another contrast with Imperial practice is in terms of combined arms integration. In the Imperial Army combined arms formations are generally created at the higher-formation level. Lift infantry may have their own fire support weapons mounted on their vehicles but grav tanks and artillery will be present as attached rather than integrated formations. Thus a lift infantry brigade might have an attached light artillery unit but this will be handled by its own commander and will mostly operate at the brigade level. Zhodani units may be formed of different troop types at any level right down to company.

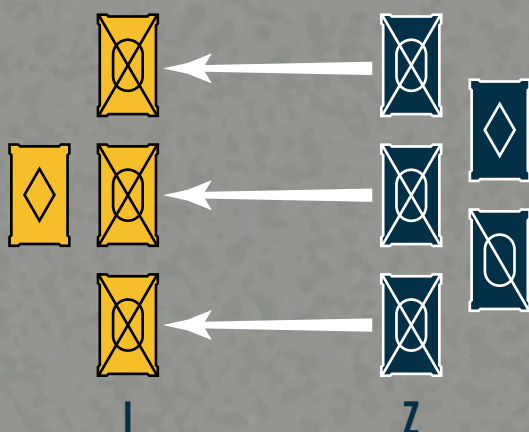
This is not the same as the 'battlegroup' concept used by some powers, which is temporary for a particular operation. A Zhodani combined arms unit might be set up in the long term and a unit might morph over time into something entirely different to its original establishment. For example, what started out as a lift infantry battalion might be assigned an aerospace defence company to create a composite unit, then gradually receive more artillery and anti-aerospace elements over time until it has become a general support formation. The infantry component will be smaller than it once was, acting as a security force and source of reinforcements for the units the battalion supports.

The upshot of this is that Zhodani units do not always conform to the standard designations used by Imperial observers. Sometimes a custom label is applied, or else the nearest parallel can be used along with some indication that it is not 100% accurate. Zhodani units do tend to be of the traditional type – infantry, artillery, cavalry, aerospace defence and so forth, and their sizes are typically similar to those of their opponents. This is for practical reasons; long experience has shown that there are many ways to organise an army but few of them are effective.

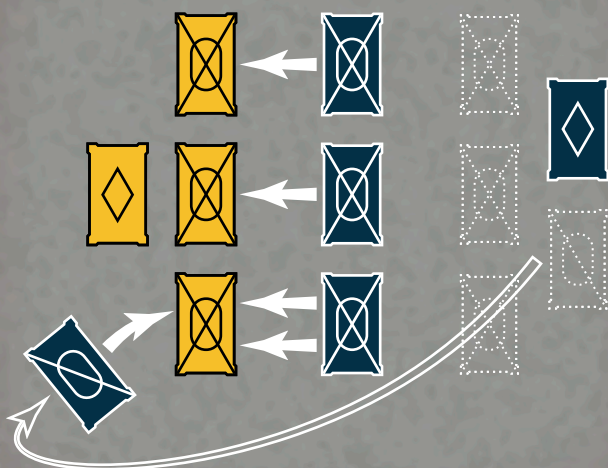
DOCTRINE: THE SYSTEM OF FIVE

Standard practice is for Zhodani forces at the tactical level to operate as five elements, of which four are what might be termed 'contact' elements. These may consist of infantry or armoured forces, or a combination of troop types. The other element of a force is the command and support element, which may be equipped for direct combat or have a purely supporting role. As always, the 'five' in this case is a noun. A force may have more than five elements, although it is rare for there to be less. A greater number of smaller elements is considered preferable in most cases.

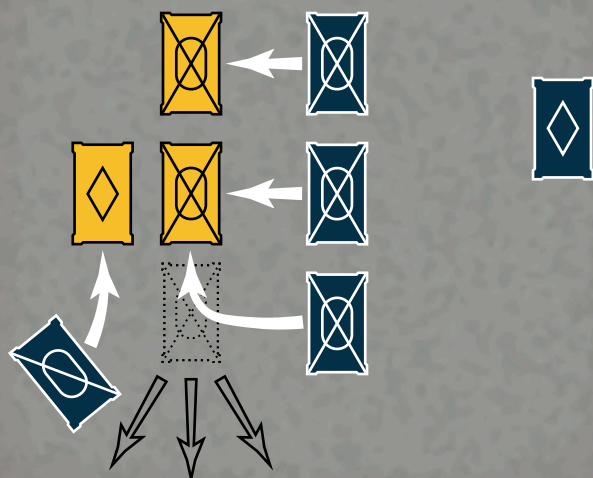
Phase 1



Phase 2



Phase 3



This also applies to higher formations. A Zhodani brigade or division-equivalent might contain more personnel or vehicles than an Imperial equivalent and they will be contained in a larger number of smaller units. The thinking behind this approach can be summed up as 'you do not need to win everywhere so long as you win somewhere'. That is to say, if an enemy's units can be tied up by slightly smaller forces for long enough to concentrate against one of them, flank it or destroy its supports, the force as a whole will be victorious.

Two approximately equal forces have met. The Zhodani force (Z) has more units, but smaller ones, than the Imperials (I).

PHASE 1

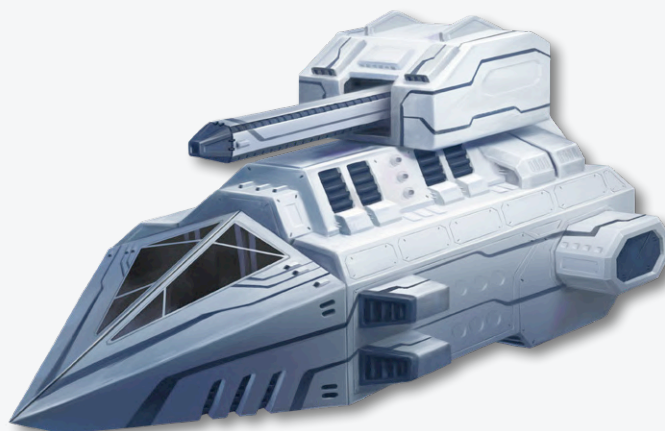
Three Zhodani contact elements apply pressure against the Imperial units in front of them. The Imperials have an advantage in direct firepower and support for each force is about equal. Imperial victory seems likely.

PHASE 2

The fourth Zhodani contact element flanks the enemy and hits the rear of one of the Imperial elements. The contact element facing it becomes more aggressive whilst the others continue to apply pressure without over-committing.

PHASE 3

The Imperial element collapses and scatters. Instead of pursuing, the fourth Zhodani contact element assaults the enemy's support and command unit while the element freed by its enemy's collapse wheels into the flank of the next opponent.



Annihilation of an enemy unit is unlikely in this scenario but with one component scattered and two driven away in a different direction – and the command formation damaged and disrupted – the enemy unit's effectiveness will be severely disrupted. Ironically perhaps, the first element of the Imperial force to break will get off most lightly in the longer term, as the intent was to remove it from the fight rather than destroy it. Once scattered the force will be largely ignored unless parts of it get in the way.

FORCE CREATION

The Zhodani Consulate does not maintain permanent military formations in the manner of the Imperium. There, the 'regimental system' preserves the traditions of units and most regiments remain in being – in some form – on a permanent basis. This means that a newly-raised battalion already has traditions to live up to and a few quirks that set it aside from other – and supposedly lesser – formations. The Zhodani Consulate considers this all to be a little silly.

A Zhodani soldier is part of the Consulate's armed forces and is heir to everything that has gone before. They will play whatever role is needed, for the good of the Consulate and its people, without becoming emotionally attached to any particular part of the military system. It is a source of pride to be a soldier of the Consulate and petty distinctions between one unit and another create unnecessary friction. Indeed, claiming that one formation is better than another is disrespectful to fellow soldiers of the Consulate!

The Zhodani equivalent to an Imperial regiment is the *zhensh-chte*, which translates loosely as 'administrative – or containing/holding – situation'. These are bureaucratic formations with no real traditions or unique identities. A *zhensh-chte* may contain up to 10,000 troops, including armoured, infantry, artillery and specialist forces, all of whom are provisionally organised into sub-units. Some of these sub-units will deploy as they are but the needs of a campaign may require some formations to be expanded or to give up troops to enhance the capabilities of another unit. The actual deployed force might come from multiple *zhensh-chte* but there is no sentimentality about regimental identity. If an entire *zhensh-chte* was deployed and completely wiped out – not that this is likely – it would simply be scratched from the books and another one raised.

The total destruction of a *zhensh-chte* for combat-related reasons is not likely but might happen for administrative purposes. If troop strength in a region is to be reduced, personnel will be transferred out and the administrative formation dissolved. In the course of their career personnel will typically pass from training to a regional *zhensh-chte* then out to regional combat forces, returning to the *zhensh-chte* either as individuals or as part of a formation ready to be redeployed as a whole.

It is at the *zhensh-chte* level that retraining and reallocation of personnel who do not fit in takes place. This is part of a wider function whereby recruits and poor soldiers are helped to become what the Consulate needs for them. The effectiveness of the Consulate's armed forces as a whole is enhanced by the work of a team of experts in every *zhensh-chte*. Someone who just does not fit in a unit might be happy and effective elsewhere, or there may be something wrong with the unit's leadership. The effectiveness advisors also assist with the selection of sub-units when creating field forces.

The Groupment (battalion-equivalent) is the standard Zhodani unit from which higher formations are created. One will be put together from suitable sub-units at the *zhensh-chte* and will remain in being for as long as it is needed. What the Imperials would call composite battalions are common where relatively small forces are deployed but in a brigade-level or higher formation specialist units are preferred.

COMMITTED FORCES

The overall force committed to the Fifth Frontier War is immense. There are two main theatres of war as far as the ground forces are concerned; the Riverland theatre, which initially encompasses Jewell and Regina subsectors and the Lanth theatre which is mainly in the Lanth and Vilis subsectors. Minor theatres include the former demilitarised zone between the border of the Consulate and Regina and other areas where fighting might occur. Each of the major theatres is commanded by a Consular Marshal, with another in charge of all minor theatres and another overseeing the defence of existing Consulate worlds.

There are, broadly speaking, five kinds of forces operating in the conflict. Defensive forces, often referred to by Imperial observers as 'colonial' forces, are assigned to guard their designated home-territory worlds and unlikely to leave. Some elements might

be moved forward as emergency replacements but overall the defensive forces are not expected to engage the enemy unless the Imperials launch a massive counterattack. At the other end of the spectrum are the assault formations, which spearhead attacks on Imperial-held worlds. These are followed by the regular formations whose task is to contend worlds and gain control over them.

Once control is established, occupation formations are moved in to improve security and consolidate the Consulate's hold over captured systems. 'Occupation' in this sense refers to defence as well as controlling the population, so occupation forces will include light and heavy aerospace and planetary defence weaponry. The other type of force is more concerned with strategic and naval operations. Typically this is specialist raider formations such as the Special Naval Landing Force, which will usually strike to destroy rather than hold. Sometimes a raid becomes an occupation but if there is any intention of staying the raiders are followed by regular and occupation units.

The Consulate does not follow a step-by-step advance-consolidate-move on strategy. It is quite willing to bypass enemy strongholds which can be cut off and reduced over time. The ground forces are asked only to fight for what the Consulate needs to gain control over, which typically means politically or economically important worlds. There is no intent at this time to create a solid block of colour on the map, so to speak. If the important systems can be taken, the rest will fall into place over time.

A Zhodani soldier taking part in the war can expect to fight on multiple worlds or spend most of the conflict securing just one, depending on the sort of unit they are part of. However, units may be moved from one formation to another and the war experience might differ considerably. One unit may spend the entire war in a quagmire of insurgency while another carries out a series of costly planetary assaults. All that is certain at this stage is that the Consulate expects each soldier to give their best for as long as it takes.



ZHODANI CONSULATE INFANTRY GROUP

A Group will normally be commanded by an Officer of Twenty or a Leader of Twenty, and will actually contain anything from 12–30 personnel. Groups are sometimes referred to by Imperial observers as half-platoons, although they may be encountered in circumstances where another force might field an entire platoon. This reflects the slightly different thinking within the Imperial and Zhodani armed forces.

The unit's main weapon is the TL14 gauss rifle and its scaled-up support variant. Both are chambered for 4.8mm darts which are incompatible with Imperial weapons. Grenadiers are issued the 28mm infantry grenade launcher and a gauss carbine. Officers will carry a gauss pistol for personal defence. They rarely take a full-sized weapon but may carry a gauss carbine if they deem it necessary.

More commonly, Zhodani officers will leave their pistols holstered and concentrate fully on leading and directing the unit, effectively going unarmed in the midst of a battle. Their example helps inspire the troops, despite, or perhaps because, officer casualties tending to be high. It is easy to spot the high-value personnel by their lack of a rifle and distinctive insignia, but this is an accepted part of being a Zhodani leader – a commander who hides among the troops is not setting the right example.

INFANTRY GROUP

Command Team

- Officer of Twenty (possible)
- Leader of Twenty
- Light Missile Weapon
- Missile Gunner
- Missile Technician

Combat Team x2

- Leader of Ten
- Infantry Soldier (Gauss Rifle) x3
- Support Gunner (Gauss Support Weapon)
- Leader of Five
- Infantry Soldier (Gauss Rifle) x3
- Grenadier (28mm Grenade Launcher)

Transport is not organic to Zhodani formations and at this level of command the force will have to rely on higher formations to provide it. Infantry are trained to fight in conjunction with vehicles, or not, depending on circumstances. A limited self-support capability is conferred by the presence of small-calibre grenade launchers which can deliver rapid indirect fire or devastating point-blank flechette attacks.

Although the commander of the unit is an Officer (or Leader) of Twenty, nominal strength of the Group is 23–24 personnel. In practice, some of the teams will be down a soldier or two and the overall fighting strength of the unit will be around 20 effectives.

ZHODANI CONSULATE INFANTRY SQUADRON

Commanded by an Officer of One Hundred, a Zhodani infantry company-equivalent has a nominal combat strength of 100 personnel. In practice this means 'paper' strength is slightly above that and practical strength is a little below. The unit consists of two primary contact elements, each organised as a Detachment of two Groups and a headquarters/support element equivalent to a fifth Group. This does not translate neatly into 'ten tens' although it comes close. There may be additional Waiting Officers assigned to a company either for assessment or to gain experience before entering the next phase of training.

Each of the contact elements is commanded by an Officer of Fifty, assisted by a Leader of Fifty. Within it are two Groups, each of which can operate independently in the short term. These are subdivided into two infantry elements and a command element which includes a missile launcher team. The command/support element has another missile team and two VRF gauss guns on ground mounts which can be dismantled and carried by the infantry personnel of the unit. Within the command/support element are a handful of infantry personnel and specialists such as the warbot handlers. These each are paired with a warbot carrying a support weapon.

The Squadron is smaller than an Imperial company but contains a significant proportion of heavy weapons, enabling it to deliver indirect fire on enemy positions and engage both armour and aerospace threats. The VRF gauss guns may limit mobility if vehicles cannot be obtained, so may be detached with a small escort to form a fire base or left behind if the situation calls for it.

INFANTRY SQUADRON

Officer of One Hundred

Leader of One Hundred

Command/Support Element

Officer of Twenty

Leader of Twenty

Headquarters Team

Leader of Ten

Infantry Soldier (Gauss Rifle) x3

Support Gunner (Gauss Support Weapon)

Leader of Five

Communications Technician

Company Medic

Warbot Handler x2

Support Team

Leader of Ten

Infantry Soldier (Gauss Rifle) x2

Light Missile Weapon

Missile Gunner

Missile Technician

Leader of Five

VRF Gauss Gun x2

VRF Gunner

VRF Loader/Technician x2

Contact Element (Detachment) x2

Officer of Fifty

Leader of Fifty

Infantry Group x2

Command Team

Officer of Twenty

Leader of Twenty

Infantry Soldier (Gauss Rifle) x2

Support Gunner (Gauss Support Weapon)

Light Missile Weapon

Missile Gunner

Missile Technician

Combat Team x2

Leader of Ten

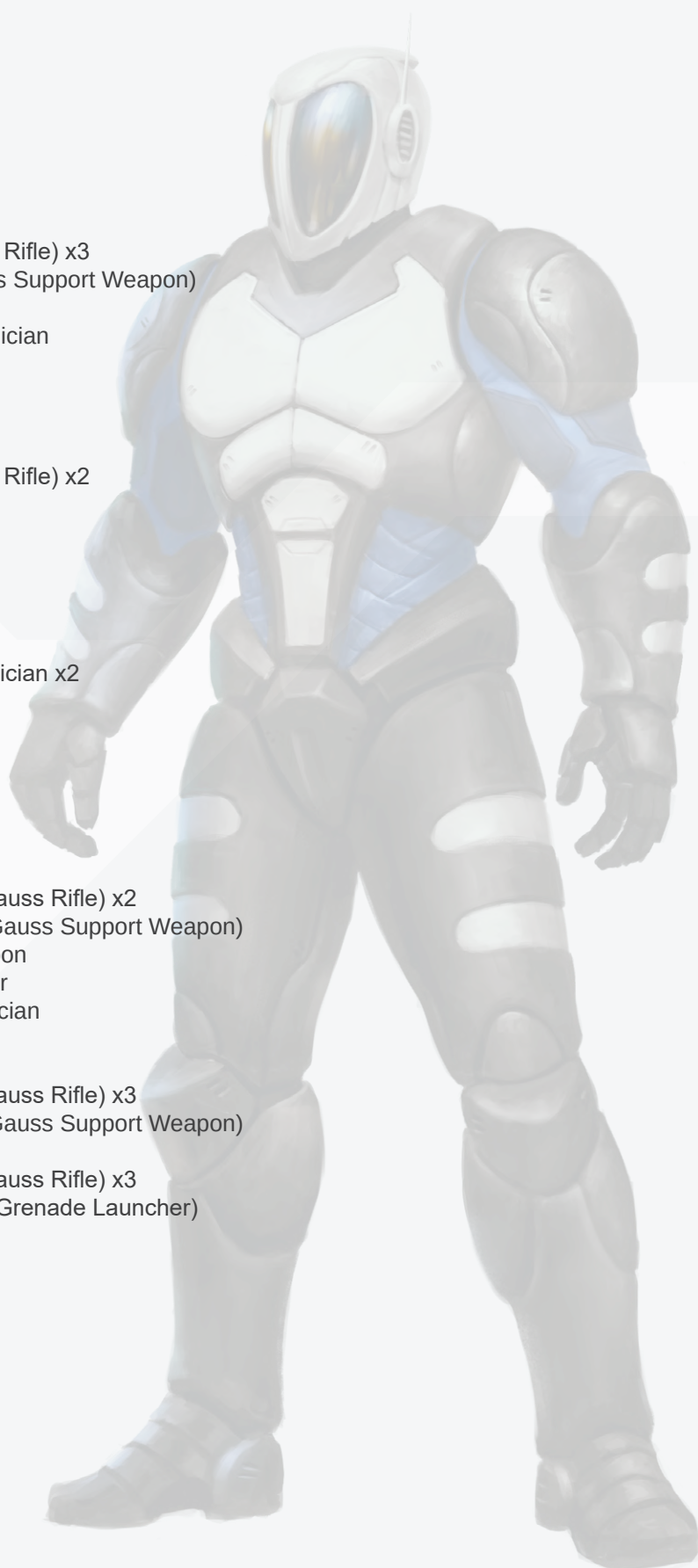
Infantry Soldier (Gauss Rifle) x3

Support Gunner (Gauss Support Weapon)

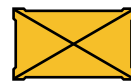
Leader of Five

Infantry Soldier (Gauss Rifle) x3

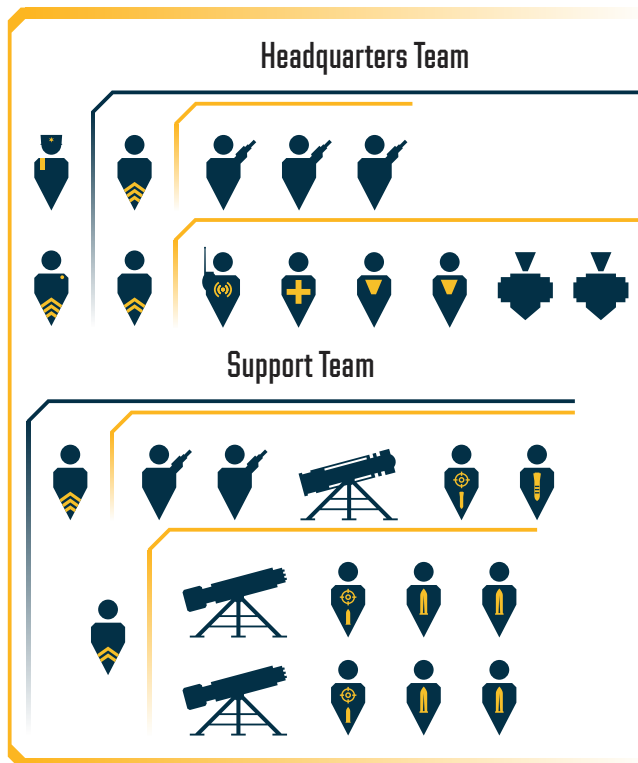
Grenadier (28mm Grenade Launcher)



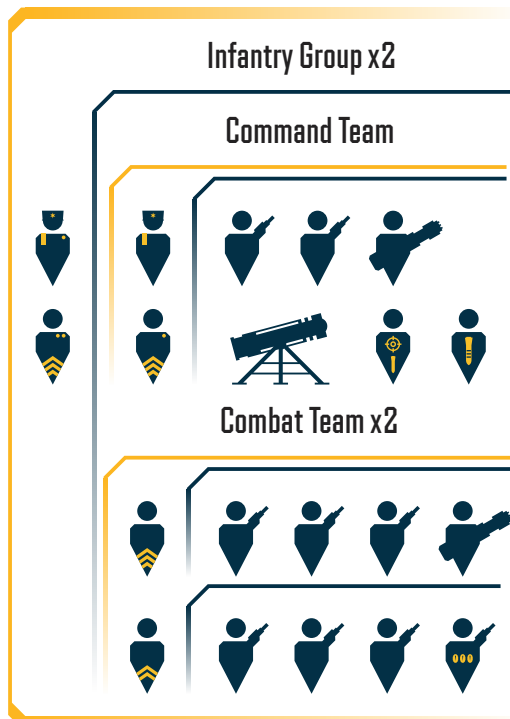
ZHODANI INFANTRY SQUADRON



Command/Support Element



Contact Element x2



KEY



Officer of One Hundred



Officer of Fifty



Officer of Twenty



Leader of One Hundred



Leader of Fifty



Leader of Twenty



Leader of Ten



Leader of Five



Communications Technician



Medic



Infantry Soldier



Support Gunner



Warbot Handler



Warbot



Grenadier



VRF Gauss Gun



Missile Gunner



Missile Technician



Light Missile Weapon



VRF Gunner



VRF Loader/Technician



COMBAT TRANSPORT VEHICLE

The prosaically named Combat Transport Vehicle is a TL14 armoured personnel carrier which is used as the basis for a range of other vehicles. There are command, electronic warfare and aerospace defence variants, along with a more lightly armoured Light Transport Vehicle which serves as a rear-echelon liaison and logistics platform.

Using an advanced fuel cell system the CTV is a typical grav sled, with a cab for two crewmembers at the front and a personnel/working space at the rear. It is intended to carry a typical five-soldier squad with enough room for combat armoured infantry to prepare to debus. The vehicle is protected against

small arms and light support weapons from most angles, although it can be penetrated by a weapon equivalent to its own from the rear.

The CTV is armed with a VRF gauss gun in a small turret and can provide direct support for its infantry component as well as some artillery and missile defence. The decision to base transportation provision around the five-soldier squad rather than a 10-soldier section equivalent pushes the overall cost of a formation up but this is offset by the greater flexibility inherent in having more vehicles and their support weapons directly available to an infantry force. Not all Zhodani infantry formations are provided with these vehicles. Some are more or less static, or use light transportation for security and garrison work.

Combat Transport Vehicle

TL	14
SKILL	Flyer (Grav)
AGILITY	+4
SPEED (CRUISE)	Fast (High)
RANGE (CRUISE)	7,000 (10,500)
CREW	2
PASSENGERS	5
CARGO	225kg
HULL	50
SHIPPING	12.5 tons
COST	MCr4.63
TRAITS	—

EQUIPMENT

Anti-Missile System (advanced laser), Autopilot (advanced), Camouflage (advanced), Communications System (advanced, encrypted, increased range), Computer/3, Control Systems (advanced), Decoy Dispenser, Fire Extinguishers, Hostile Environment, Life Support (short term), Navigation System (improved), Sensors (advanced, hardened)

Autopilot (skill level)	3
Communications (range)	10,000km
Navigation (Navigation DM)	+4
Sensors (Electronics (sensors) DM)	+2
Camouflage (Recon DM)	-4
Stealth (Electronics (sensors) DM)	—

WEAPONS

Small Turret (VRF gauss gun)

ARMOUR

Front	34
Sides	29
Rear	20
Top	24
Underside	24



WEAPON	RANGE	DAMAGE	MAGAZINE	MAGAZINE COST	TRAITS	FIRE CONTROL
VRF Gauss Gun	1	4D	400	Cr1000	AP 5, Auto 8	+4

ZHODANI CONSULATE OCCUPATION SQUADRON

In Zhodani parlance, 'occupation' does not necessarily translate to hostile control over a captured world. This is of course possible but an occupation force may also be tasked with securing a member world of the Consulate – ensuring continued control – or helping a recently taken-over world to become a full member. The occupation units most likely to be encountered in the early stages of the Fifth Frontier War are on captured Imperial worlds, but raids or counteroffensives might run into spirited resistance from similar formations holding worlds under Imperial attack.

The building block of these forces is the occupation Squadron. Nominally 100 personnel in strength, like other Zhodani Squadrons, it is subdivided into a command/support element equivalent in strength to

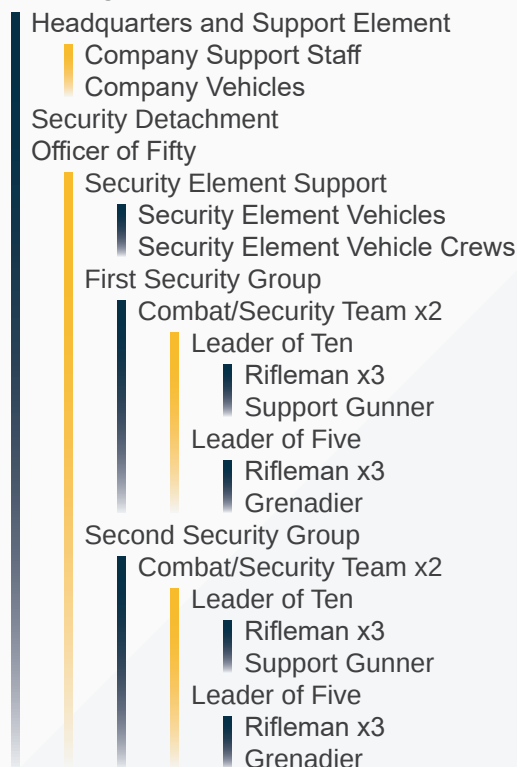
a Group plus two contact Detachments. One of these is optimised for security work and is organised like an infantry force, although personnel have additional training in dealing with civil disturbances and criminal activity rather than military threats. The second element is defensive and has additional heavy weapons.

Occupation Squadrons are assigned to higher formations but are intended to be broken off and sent to protect and secure installations and population centres away from their headquarters – perhaps even in a different star system. The commanding officer of such a unit may have to deal with governance issues whilst dealing with people whose outlook is very different to that of a Consulate citizen. This is a demanding role that will prepare a young officer well for higher command.

A formation of this type has a few vehicles but is not intended to be a mobile warfighting force. Likewise, its support is light as it should be able to co-opt local facilities.

OCCUPATION SQUADRON

Officer of One Hundred
Leader of One Hundred



Defensive Detachment
Officer of Fifty



ZHODANI CONSULATE WARBOT SQUADRON

Warbot companies are assigned to other formations, notably infantry Groupments, to provide additional fire support or specialist functions. The company consists of the usual leadership and headquarter security elements plus a warbot maintenance workshop and the contact elements. These are grouped according to function, although many units are equipped with general-purpose warbots with no specialist role.

Leaders of Five and Ten are usually experienced 'bot handlers in their own right, who advise and direct the handlers under their command and who can take over a bot whose handler is out of commission. They are also experts in repair and maintenance, and have a role in ensuring that warbots are correctly mentored over time. A skilled warbot handler can expect promotion through this level to become a warbot expert at the brigade or even army level.

WARBOT SQUADRON



ZHODANI RIFLE GROUPMENT

The primary fighting arm of the Zhodani Consulate is infantry. Like other powers, the Consulate fields battalion-sized formations (Groupments) comprising combat-armoured personnel armed with small arms and light support weapons. Groupments are traditionally composed of five Squadrons and are commanded by an Officer of Five Hundred. Actual strength can vary in terms of the number of Squadrons and/or the number of personnel in them, although a unit put together at the beginning of the campaign is likely to be close to the standard model.

Transport assets are not organic to a Zhodani infantry Groupment. It will have some vehicles but these are insufficient to transport the whole force at once. Infantry formations train to fight with and without vehicular support and mobility, and are turned from infantry to lift infantry by the provision of sufficient transport. One reason for this is close cooperation with space forces in many campaigns. A unit landing aboard shuttles and supplied from logistics ships in orbit does not need the amount of vehicles a fully mobile ground force would.

The standard-model infantry battalion consists of a Groupment core formation plus four contact elements. These are usually infantry Squadrons but it is entirely possible for one or more of them to be replaced by specialist troops or a support type. The Groupment core can be considered the equivalent of an Imperial headquarters company. It is not uncommon for a Groupment assigned a particular task to be given one or two additional Squadrons. These are usually, but not always, specialists or a heavy weapons Squadron. Expansion is conducted on a pragmatic basis; when small units are added to a Groupment they are assigned to the core, while larger additions become an extra Squadron.

GROUPMENT CORE ELEMENT

The Groupment core provides command and support functions for the local formation. It will usually include some vehicles even if the contact elements have none. A Groupment core that has had all its contact elements stripped away may be used as an administrative unit and/or a garrison for a location of minor importance.

Command Element: The command element contains the battalion's commanding officer and executive officer, senior non-commissioned officers and a communications staff. There is a small attached security element equivalent to an infantry Group. The command element will usually have a command-variant APC for the commanding officer and one for the executive officer, plus some soft-skinned vehicles for liaison and security work.

Heavy Weapons Element: The heavy weapons element consists of four Gunskiff teams plus a command vehicle. The latter carries a missile team in addition to the unit leader. Two of the Gunskiffs are armed with VRF gauss guns and two with battlefield lasers. The weapons are dismountable and can be set up in a defensive ground configuration.

Logistics Element: The logistics element in an infantry battalion is rather small. It answers to the formation's logistics officer and is staffed mainly by junior and senior NCOs who are experts in supply management. The logistics element may not have much transport of its own, functioning as a receiving and warehousing asset. If the unit deploys as a lift infantry unit the logistics element will be paired up with a transport company to support operations in the field.

Intelligence Element: The battalion intelligence element consists of the intelligence officer plus a small staff, as well as a reconnaissance element who use open-topped vehicles to conduct scouting operations. Four personnel plus a pilot are assigned to each vehicle.



Medical Element: The medical element is equipped with a small mobile aid post which can be dismantled and carried aboard light grav vehicles such as air/rafts. There are also two field ambulance-configuration air/rafts for casualty evacuation.

Service Element: A battalion core has a service element equipped with a mobile field kitchen mounted on an unarmoured grav truck chassis. The small maintenance staff and their rather basic equipment are also assigned to the service element where they serve as additional workers and 'runners' for general tasks when not maintaining and repairing the unit's equipment.

SPECIALIST ELEMENT(S)

Any specialist elements assigned to a given Groupment will depend on its intended role. Most commonly, a specialist element will be a warbot company, which is usually broken up to provide fire support to the contact companies. Combat engineers may be assigned instead, or an aerospace defence company.

CONTACT SQUADRONS

There are usually four 'contact' Squadrons in a Zhodani battalion, generally organised as two pairs of Squadrons which will form the 'front flank' (usually covering the front right of the overall formation) and 'rear flank' (rear and left flank).

TRANSPORT

If a lift infantry force is required, Squadrons from a transport Groupment will be assigned to work with the infantry to create a suitable force. Extra transport will also be assigned to the command element. The transport contingent is a separate formation with its own command structure but its commanding officer is subordinate to the infantry commander when assigned. The transport element will usually have armed vehicles which can provide fire support or function as the fifth element in a 'system of five' combat plan along with the command element of that segment of the force.

The Groupment detailed here has been formed as lift infantry by combining an infantry force with suitable transports. One Squadron is a composite unit with an armoured reconnaissance vehicle (a light grav tank) added to each of its Groups to provide fire support. It is designated as a lift cavalry Squadron but can equally be considered a reinforced lift infantry Squadron. Its enhanced capabilities are more important than the exact label.

[LIFT] INFANTRY GROUPMENT

Officer of Five Hundred

Groupment Core

Command Element

Command Staff

- Command APC x2

Security Element

- Command Element Vehicle Pool

Heavy Weapons Element

Command Vehicle

- Missile Team

- Gunskiff (VRF Gauss Gun) x2

- Gunskiff (Laser) x2

Logistics Element

Supply Staff

- Logistics Vehicle Pool

Intelligence Element

Intelligence Staff

- Reconnaissance Element

- Command Vehicle

- Recon Vehicle x4

Medical Element

Medical Staff

- Aid post

- Grav Ambulance x2

Service Element

Field Kitchen

- Maintenance Staff

Front Flank Element

- Lift Infantry Squadron

- Composite Lift Cavalry Squadron

Rear Flank Element

- Lift Infantry Squadron x2

(Additional)Transport Squadron

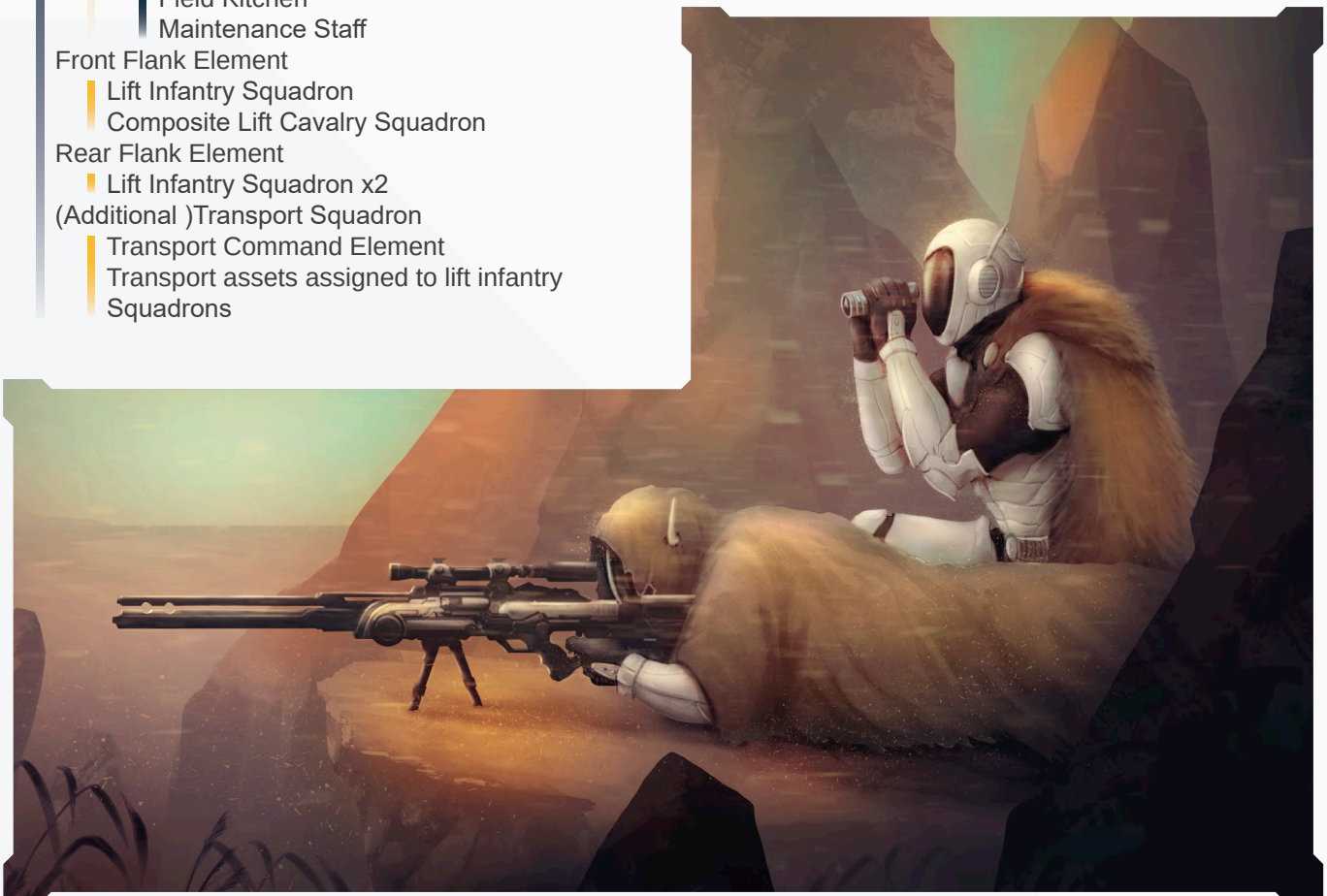
- Transport Command Element

- Transport assets assigned to lift infantry Squadrons

MILITARISED AIR/RAFT

The standard air/raft used by Zhodani forces is an open-topped design with a retractable soft canopy which provided some protection against rain but not much else. Provision is made for a crew of two and there is a ring mount for a support weapon. If one is fitted the vehicle could be redesignated as a Gunskiff, but far more commonly these air/rafts continue to carry out routine transportation work even if armed. Only when acting as fire support platforms does the designation really apply.

Militarised air/rafts are used for a range of tasks including light cargo and personnel transportation, reconnaissance, artillery spotting, casualty evacuation and moving small groups of infantry quickly as part of a rapid-reaction force. The vehicles are cheap but horribly vulnerable to enemy fire. Nevertheless, they are routinely converted into mobile command posts, electronic warfare platforms and anything else that needs to be mobile. Similar vehicles are used in other armed forces, including civilian air/rafts co-opted to bridge the inevitable gap between the amount of transport a unit has and what it needs.



Militarised Air/Raft

TL	14
SKILL	Flyer (Grav)
AGILITY	+5
SPEED (CRUISE)	Very Fast (Fast)
RANGE (CRUISE)	8,000 (12,000)
CREW	2
PASSENGERS	—
CARGO	2 tons
HULL	24
SHIPPING	6 tons
COST	Cr640500
TRAITS	—

EQUIPMENT

Autopilot (advanced), Communications System (improved, encrypted), Control Systems (advanced), Fire Extinguishers, Navigation System (advanced), Sensors (basic)

Autopilot (skill level)	3
Communications (range)	500km
Navigation (Navigation DM)	+2
Sensors (Electronics (sensors) DM)	+1
Camouflage (Recon DM)	—
Stealth (Electronics (sensors) DM)	—

WEAPONS

Ring Mount (empty)

ARMOUR

Front	4
Sides	4
Rear	4
Top	4
Underside	4



VANGUARD GROUPMENT

Officer of Five Hundred

Groupment Core

- Command Element
- Logistics Element
- Medical Element
- Service Element
- Groupment Workshop Element
- Combat Engineering Detachment

Front Flank Element

- Vanguard Squadron x2
 - Command Element
 - Light Grav Tank
 - Lift Infantry Group
- Vanguard Detachment x4
 - Light Grav Tank
 - Lift Infantry Group

Rear Flank Element

- Vanguard Squadron x2
 - Command Element
 - Light Grav Tank
 - Lift Infantry Group
- Vanguard Detachment x4
 - Light Grav Tank
 - Lift Infantry Group

VANGUARD/ARMoured RECONNAISSANCE GROUPMENT

Integration of armour and artillery is generally at a lower level in the Zhodani armed forces than elsewhere, although some pure armoured formations exist. More commonly, tanks are added to lift infantry formations to increase their fighting power. Depending on the proportions of tanks to infantry these may be designated as armoured formations or lift infantry, or in the case of this force an armoured reconnaissance unit.

Where some militaries would conduct such operations with light tanks alone the Consulate prefers to mix lift infantry and light armour to create a fast-moving formation that can both deliver high firepower but also seize and hold an objective. In this role a force would be designated as a 'vanguard' formation as its role includes reconnaissance, screening and the initial assault of an objective.

On the move, a vanguard force will 'bounce' from one position to another, dropping infantry to hold the objective until no longer necessary. If resistance is encountered it will go over to the offensive, calling upon other manoeuvre elements to move up on its flanks and hook into the enemy rear. Command of a vanguard element is usually a precursor to promotion into a more strategically important role and if the Consulate approved of glorifying any job in the military it would be that of a vanguard soldier.

Z-66 LIGHT GRAV TANK

The standard light grav tank in Zhodani service is designated Z-66 by Imperial observers. It follows a standard 'wedge and big turret' design but is more angular than an Imperial equivalent. As with many Zhodani armoured vehicles the interior is very cramped, with the crew of three all housed in the control compartment at the front of the main hull. The reactor is behind them along with the turret mechanism. Crew have no access to the turret from inside the vehicle.

Primary armament is a fusion-Y gun mounted in a large turret, with a co-axial VRF gauss gun for anti-personnel work. Even in the frontal arc, chances of surviving a direct hit from a weapon of this sort are low but this is a light tank intended for fire support and skirmishing rather than toe-to-toe battles with main battle tanks.



Z-66 Light Grav Tank

TL	14
SKILL	Flyer (Grav)
AGILITY	+4
SPEED (CRUISE)	Fast (Medium)
RANGE (CRUISE)	—
CREW	3
PASSENGERS	—
CARGO	—
HULL	70
SHIPPING	17.5 tons
COST	MCr14.67
TRAITS	AFV

EQUIPMENT

Anti-Missile System (advanced laser), Autopilot (advanced), Camouflage (advanced), Communications System (advanced, encrypted, increased range), Computer/3, Control Systems (advanced), Decoy Dispenser, Fire Extinguishers, Fusion Plant (advanced), Hostile Environment, Life Support (short term), Navigation System (improved), Sensors (advanced, hardened)

Autopilot (skill level)	3
Communications (range)	10,000km
Navigation (Navigation DM)	+4
Sensors (Electronics (sensors) DM)	+2
Camouflage (Recon DM)	-4
Stealth (Electronics (sensors) DM)	—

WEAPONS

Large Turret (fusion gun-Y, VRF gauss gun)

ARMOUR

Front	80
Sides	58
Rear	48
Top	40
Underside	40



WEAPON	RANGE	DAMAGE	MAGAZINE	MAGAZINE COST	TRAITS	FIRE CONTROL
Fusion Gun-Y	5	3DD	—	—	AP 20, Blast 20, Radiation	+4
VRF Gauss Gun	1	4D	400	Cr1000	AP 5, Auto 8	+4

DISTANT FLANK SECURITY FORCE

One formation type fielded by the Zhodani Consulate which does not really have a parallel elsewhere is the *Chetz lafalfia*, or 'Distant Flank Security Force'. This is equivalent to two Squadrons but contains a mix of troop types making it capable of combined arms operations without external support. It is a keystone of Zhodani strategy that formations of this type will be landed on target worlds to contest areas that are not the main target at that time.

CHETZ IAFALFIA

Officer of One Thousand
Leader of One Thousand

Groupment Core

- Command Element
- Heavy Weapons Element
- Logistics Element
- Intelligence Element
- Medical Element
- Service Element

Artillery Company

- Command/Support Element
- Headquarters Element
- Artillery Element

Primary Contact Element

- Command Group
- Infantry Squadron x3
- Armoured Recon Squadron

Support Element

- Command Group
- Infantry Squadron x2
- Combat Engineering Squadron
- Warbot Squadron

(Additional) Transport Detachment

The *Chetz lafalfia* can be thought of as a flank security formation, except that some of the flanks it secures may be hundreds of kilometres from the main theatre of combat. In this context the force is intended to prevent interference in the main battle. It does not have to win its fights but does need to keep enemies in that area busy so they cannot reinforce others.

Forces of this type are also deployed to worlds with a scattered population or where there are multiple minor theatres of combat. A single *Chetz lafalfia* may be responsible for all military operations on an entire continent and might receive little or no support throughout its campaign. The force would be expected to subdue resistance and establish firm control even in the face of a determined insurgency.

The *Chetz lafalfia* is built around a standard Groupment core and will usually have nine other Squadrons plus their associated transport assets. The usual composition is to have one Squadron operating with the core and two contact elements composed of four Squadrons each, but this can vary depending on the mission and the available force. The most common configuration of these forces is shown here, comprising a lift infantry/armoured reconnaissance Groupment and a support Groupment, plus an artillery company which is normally associated with the force's core Groupment.

LIGHT ARTILLERY SLED

Based on the chassis of an older light tank design, the Light Artillery Sled exists only to carry a high velocity mass driver cannon into action. It has full NBC protection for the crew but no airlock and is not normally fitted with an anti-personnel weapon, although a pintle mount atop the driving cab can carry an infantry weapon at need. The crew of three (commander, pilot and gunner) are all carried in the cab with limited access to the automated gun machinery.

Primary armament is a powerful mass driver cannon intended for artillery support of other units. This weapon can be used for direct fire and the relatively well protected frontal glacis of the vehicle allows limited use as an assault gun or even a light tank destroyer. This feature is debatable, since the LAS cannot withstand a hit from an anti-armour weapon anywhere but its strongest facing and protection elsewhere is very light. However, most LAS units will never directly engage the enemy so the point may be moot.



Light Artillery Tank

TL	14
SKILL	Flyer (Grav)
AGILITY	+4
SPEED (CRUISE)	Fast (High)
RANGE (CRUISE)	7,000 (10,500)
CREW	3
PASSENGERS	—
CARGO	1.25 tons
HULL	48
SHIPPING	12 tons
COST	MCr5.213
TRAITS	—

EQUIPMENT

Anti-Missile System (advanced laser), Autopilot (advanced), Communications System (advanced, encrypted, increased range), Computer/3, Control Systems (advanced), Decoy Dispenser, Fire Extinguishers, Hostile Environment, Life Support (short term), Navigation System (improved), Sensors (advanced, hardened)

Autopilot (skill level)	3
Communications (range)	10,000km
Navigation (Navigation DM)	+4
Sensors (Electronics (sensors) DM)	+2
Camouflage (Recon DM)	—
Stealth (Electronics (sensors) DM)	—

WEAPONS

Fixed Mount (high velocity mass driver cannon)
Pintle Mount (empty)

ARMOUR

Front	40
Sides	26
Rear	20
Top	16
Underside	16



WEAPON	TL	RANGE	DAMAGE	TONS	COST	MAGAZINE	MAGAZINE COST	TRAITS
CCLS-High Velocity Mass Driver Cannon	14	40 (4)	2DD	4	Cr400000	50	Cr1000	AP 20

PLANETARY ARMIES AND OCCUPATION FORCES

The planetary armies of the Zhodani Consulate are far more centralised than those of the Imperium. World governments will have paramilitary security forces, if deemed necessary, but warfighting comes under the remit of central command. Worlds contribute to the military budget and are entitled to a suitable provision in terms of defensive units but they do not 'own' the forces assigned to them. Nor is the defence of a world a matter for its government, other than in an advisory role. A commander will be assigned along with suitable forces drawn from those available in the region.

Many of the units assigned for planetary defence are identical to those that might be sent to conquer an enemy world but specialist defensive formations do exist. Some of these are included in the armies sent against the Imperium, serving as occupation

forces after a world is taken. Occupation battalions are specialist formations optimised for defence and security. They are intended to operate solo or as the core of a larger occupation force, or to spread their companies out over several locations which may not be on the same planet.

Occupation Groupments are raised and equipped for their role rather than being converted from infantry formations, and are intended to perform both security operations and defence against a significant military threat. They are often broken down into sub-units scattered across a planet or even several minor worlds and installations. It is usual for an occupation Groupment to have at least two standard infantry Squadrons on strength as well as a field engineering company.

An occupation Groupment's engineering contingent, along with whatever other personnel can be spared, is likely to be very busy repairing the damage done in capturing the world and securing the unit's base. Once defences are in place the troops will usually switch to civil projects. This is not entirely altruistic; getting the lights and the entertainment channels back on has been proven to reduce resistance to a takeover.

The Groupment core and the field engineering Detachment form the command/support element of the force, with four field elements. Three of these are occupation Squadrons and one is an infantry Squadron. It might be more efficient to group the defensive and security elements as separate elements but the subdivision is already in place at the company level to allow whole companies to be broken off and assigned elsewhere.

OCCUPATION GROUPMENT

Officer of Five Hundred

Groupment Core

Command Element

Command Staff

Command APC x2

Security Element

Command Element Vehicle Pool

Heavy Weapons Element

Command Vehicle

Missile Team

Gunsiff (VRF Gauss Gun) x2

Gunsiff (Laser) x2

Logistics Element

Supply Staff

Logistics Vehicle Pool

Intelligence Element

Intelligence Staff

Reconnaissance Element

Command Vehicle

Recon Vehicle x4

Medical Element

Medical Staff

Aid post

Grav Ambulance x2

Service Element

Field Kitchen

Maintenance Staff

Field Engineering Detachment

Occupation Company x3

Infantry Company

HIGHER FORMATIONS

Zhodani higher formations are organised as necessary, although there are well-proven standard configurations which correlate roughly to an Imperial brigade, division, corps or army. These are named for their function rather than specific composition. These higher units are often referred to by their Imperial equivalent for simplicity.

The equivalent of an Imperial brigade is *Zdiaqa Ans*, which translates roughly as 'field force of five thousand'. This figure is almost entirely symbolic; a *Zdiaqa Ans* can comprise anything from two Groupments and some supporting troops up to 20 or more Groupments. It might be more accurate to use a looser translation and refer to the *Zdiaqa Ans* as a 'field force requiring the command of an Officer of Five Thousand'. If a standard composition exists it would be three mobile



combat elements each of two Groupments plus a core element with an artillery Groupment attached. A smaller formation might have only one Groupment in its manoeuvre elements and be commanded by an Officer of Two Thousand but still be considered a brigade-equivalent by its opponents.

A division-equivalent is formed from two or more *Zdiaqa Ans* and is known as *lanzh Eflabibl*, or 'field force of ten thousand'. Again, this number is symbolic and it is more accurate to say that an *lanzh Eflabibl* is a 'field force requiring an Officer of Ten Thousand in command'. Standard composition does not really exist at this level; a division-equivalent might be heavily reinforced one week then required to send almost all of its contact formations off to join another the next. A gutted *lanzh Eflabibl* will then be used as the basis for a reconstituted force or begin functioning as an administrative and governmental institution while the world is pacified.

The Zhodani equivalent to an Imperial corps is *Aqlzizh Krelsiatl* and requires an Officer of Fifty Thousand in command. Some *Aqlzizh Krelsiatl* are deceptive or placeholder in nature. They have a full command structure and some security troops but have not yet been assigned combat formations – or are masquerading as a combat-ready corps-equivalent to

deceive the enemy. Above this level is the equivalent of an Imperial army, known as *Bal Ofraqo*. There is no standard composition for such a force, which might be assigned to one part of an important world or scattered across two dozen minor ones.

The key to creating these formations is the establishment of command units built around a senior officer and their staff. Some command units are carried aboard specialist starships and remain in orbit while combat is taking place on the planet below. This is contrary to Imperial thinking, which holds that morale may suffer if the commander in chief is not in the field with the grunts, but Zhodani soldiers accept that effective direction is more important than an officer being seen to share the dangers of the troops they command.

Orbital command posts are used where a campaign is expected to be short and where security against starship raids is relatively guaranteed. For longer campaigns a planetside command facility is desirable. These are configured in a very similar manner to a battalion core and usually paired with a specialist command security battalion which has a high proportion of heavy weapons and anti-aerospace systems. To this mobile field headquarters are added whatever forces are deemed necessary. A brigade-equivalent

will normally have four contact elements, each with two Groupments, in addition to its core and security element while a division-equivalent will usually have four brigade-equivalent sub-formations in addition to its headquarters element and heavy supports.

Zhodani higher formations are less uniform than their Imperial equivalents and sub-units are routinely moved around to strengthen a force when needed. This is accompanied by deception operations wherever possible. For example, a brigade-equivalent facing a similar Imperial force might make a display of strength with raids and spoiling attacks, then peel off some of its sub-units to assist a neighbouring force in making a powerful attack. Hopefully the enemy will not realise that one formation in the line facing them has shrunk and another has grown almost into a division-equivalent.

ZHODANI LIFT RIFLE *ZDIAQA ANS* (BRIGADE-EQUIVALENT)

Officer of Five Thousand

Force Core

- Command Element
- Logistics Element
- Intelligence Element
- Medical Element
- Service Element
- Combat Engineering Squadron
- Aerospace Defence Squadron

Headquarters Security Groupment

- Command Element
- Warbot Squadron
- Defensive Element
 - Heavy Weapons Squadron
 - Aerospace Defence Squadron
- Response Element
 - Rapid-Response Squadron x2
 - Response Support Squadron

Force Artillery Reserve (Groupment-Equivalent)

Front Flank

- Lift Infantry Groupment x3
- Armoured Reconnaissance (Light Grav Tank) Groupment

Rear Flank

- Lift Infantry Groupment x4

The full-strength lift rifle *Zdiaqa Ans* detailed here is only one possible configuration for such a force. The HQ security battalion is subdivided into two main elements, each with a different focus. The defensive element is intended to provide heavy protection to the force HQ and is equipped with anti-armour and

anti-aerospace weapons as well as emplaceable anti-personnel support weapons. The response unit is more lightly equipped and has light grav vehicles for patrol and fire support work.

This *Zdiaqa Ans* has been assigned sufficient forces to create three lift infantry elements and a composite armoured reconnaissance/lift infantry element in addition to a pool of artillery weapons assigned to the force core but available to any of the contact elements. Ideally each contact element has two Groupments but it is common for some or all to have one plus some attached troops. This means that the commanding officer will have anything from four Groupments to eight available for manoeuvre operations, plus supports. As a rule of thumb this gives a Zhodani brigade-equivalent around 1,500–3,000 effectives, which is sufficient to require an Officer of Five Thousand in charge.

This general configuration is repeated at the division-equivalent level, with additional field and heavy artillery assigned to divisional command. Depending on the intended mission, the division might or might not contain an armoured brigade-equivalent but if not it is likely to have an armoured Groupment assigned to its headquarters. The pattern of five brigade-equivalents to a division-equivalent is not slavishly followed, although there will usually be some form of the standard 'core and four' in place. A division-equivalent which has only two or three brigade-equivalents will usually create small manoeuvre formations to make its elements up to four. These are used to provide flank security or to confuse the enemy about its actual numbers and composition.

Z-80 MAIN BATTLE TANK

Operating under the Imperial reporting name Z-80, the primary main battle tank of the Zhodani Consulate was introduced just too late to see much combat in the Fourth Frontier War but has been pushed into service in impressive numbers. It is normally deployed in armoured Groupments assigned to brigade-equivalents or in specialist armoured assault formations.

Armament is the same fusion Y-gun used in the T-66 but carried in a much more heavily armoured turret. The Z-80 is as heavily armoured as a main battle tank of this Tech Level can be, at least in the frontal arc. On balance of probabilities it can survive a direct hit from a fusion gun, enabling the Z-80 to slug it out with the best Imperial tanks.

Z-80 Main Battle Tank

TL	14
SKILL	Flyer (Grav)
AGILITY	+2
SPEED (CRUISE)	High (Medium)
RANGE (CRUISE)	—
CREW	3
PASSENGERS	—
CARGO	250kg
HULL	100
SHIPPING	25 tons
COST	MCr21.645
TRAITS	AFV

EQUIPMENT

Anti-Missile System (advanced laser), Autopilot (advanced), Camouflage (advanced), Communications System (advanced, encrypted, increased range), Computer/3, Control Systems (advanced), Decoy Dispenser, Fire Extinguishers, Fusion Plant (advanced), Hostile Environment, Life Support (short term), Navigation System (improved), Sensors (advanced, hardened)

Autopilot (skill level)	3
Communications (range)	10,000km
Navigation (Navigation DM)	+4
Sensors (Electronics (sensors) DM)	+2
Camouflage (Recon DM)	-4
Stealth (Electronics (sensors) DM)	—

WEAPONS

Large Turret (fusion gun-Y, VRF gauss gun)

ARMOUR

Front	150
Sides	136
Rear	130
Top	100
Underside	100



WEAPON	RANGE	DAMAGE	MAGAZINE	MAGAZINE COST	TRAITS	FIRE CONTROL
Fusion Gun-Y	5	3DD	—	—	AP 20, Blast 20, Radiation	+4
VRF Gauss Gun	1	4D	400	Cr1000	AP 5, Auto 8	+4



THE CONSULAR GUARD

The Consular Guard is a specialist force of psionically capable soldiers. Its most famous – and most feared – units are commandos capable of teleporting themselves into a supposedly secure location. While this capability is certainly impressive, the Consular Guard acts as a force-multiplier in more subtle and perhaps more strategically important ways. Psionic reconnaissance units can spy out an enemy's defences without them knowing anything has happened. Telepathic intelligence operatives can get information out of the most determined prisoner. Just as importantly, Consular Guard detachments may be able to detect disloyalty and treachery in time to prevent it.

The Guard does not deploy en masse in Groupments; rarely even in Squadrons. Instead, its personnel work in small teams with whatever equipment and weaponry they require. Commandos use battle dress and the most powerful personal weaponry available, but many Guard personnel need only a chair and a quiet room to alter the local strategic landscape. The presence of the Guard is not always advertised. Sometimes it is worth making an impression with cloaks streaming and braid gleaming but often more can be achieved by avoiding notice. This has a morale effect as well, since an enemy who cannot be sure if there are clairvoyant recon teams or teleport-capable commandos in the area will be uneasy whether or not they are actually present.

Recruitment is only open to Nobles and Intendents with useful psionic powers but the definition of 'useful' is wider than might be imagined. Someone with minimal telepathic abilities will not rise far in the ranks of the Guard but their shielded thoughts leave potential hostiles guessing whether they are being scanned. The Consular Guard makes extensive use of such low-talent individuals for security work and to disguise the activities of those with more potent abilities.

THE SPECIAL NAVAL LANDING FORCE

The Special Naval Landing Force (SNLF) is normally concerned with small-scale operations and is more properly considered a part of the naval forces rather than being a ground combat asset. Its personnel do sometimes spearhead planetary invasions by making a meteoric assault from orbit to secure a landing site, and might be co-opted into a ground force if a senior enough officer requests it.

SNLF units are organised much like infantry at the small-unit level, although warbots are common in even the smallest formations. Out of 20 personnel nominally forming a SNLF Group, up to a third might be warbot handlers. This, combined with a high standard of training and highly aggressive tactics, makes a SNLF unit a formidable force in a relatively small-scale action. At the higher level these units can be effective force-multipliers if used correctly but they are rarely available to ground force commanders except in the early stages of an invasion.

GROUND FORCES OF THE SWORD WORLDS CONFEDERATION

The ground forces of the Sword Worlds Confederation are less uniform than those of other belligerent states. They are contributed by worlds with a diverse outlook, who do not always get along, but there are some general traits in common. Ground forces use a three-tier system, with high-end formations equipped with grav transport and regular forces using wheeled vehicles for the most part. The third tier is made up of irregular and ad-hoc formations generally referred to as 'volunteer units'. Equipment and organisation at this level tends to vary considerably.

What all Sword Worlds forces have in common is a sense of honour and duty that can lead to pointlessly stubborn or reckless behaviour. Individual prowess and valour are lauded, which can also be a double-edged blade. On one hand, beleaguered units will be inspired to fight on by the knowledge that others would do the same – and that a force that surrenders when all is not yet lost will be forever dishonoured. Personnel also know that their comrades will respect their brave stand and will make every attempt to relieve them. Of course, this is a problem as often as it is an asset. Sword Worlds forces are extremely resilient but this can lead to them taking worse casualties than they would had they been willing to cut their losses.

The likely enemies of Sword Worlds forces are Darrian, Imperial and each other – not necessarily in that order. When facing a technologically more advanced opponent, casualties and disruption of units is inevitable, and command and control systems reflect this. All formations are designed to be able to break up into smaller components and keep fighting, creating a force that can take a hammering yet remain at least marginally capable of causing harm to the enemy.

A 'hit, scatter, regroup' philosophy pervades most design and doctrine within the Sword Worlds military. Artillery formations are designed to deliver maximum firepower in as short a time as possible; grav cavalry

forces emphasise the capability of a single tank to survive a counterattack and continue causing mayhem. Some Imperial observers have misconstrued this as a brute-force approach to warfare but it is almost entirely the opposite. A force might well be smashed in the first minutes of an engagement but it will already have caused a lot of damage. As the larger formations are pounded, they break up into sub-units that continue to fight with aggression and intelligence.

This doctrine runs throughout the Sword Worlds military, influencing equipment design, training and tactics. Sword Worlds military personnel are warriors as well as soldiers, trained to make intelligent decisions and carry out bold actions even when their comms are down and there is nothing resembling order to the fight. Indeed, it is in this sort of chaotic scramble that the Sword Worlds military excels.

Combat formations use a 'battlegroup' organisational structure. Formal units such as regiments, battalions and divisions exist but protocols are always in place for command to devolve downward on whatever assets survive. Officers at all levels are trained to scrape together whatever forces they have available and make use of them, and this is routinely done even when heavy losses have not been taken. Thus a neatly organised lift infantry brigade might arrive in the theatre of war but very quickly its elements will be mixed up with whatever other forces are available in a bewildering array of task-oriented battlegroups. The system is flexible and resilient but it is also a logistical nightmare.

The majority of ground force personnel are trained and equipped as light infantry, with 'light' in this case referring to a lack of transport and weapons that require it. Light infantry units are paired up with transport assets to create mechanised, motorised or lift infantry formations. Some units are raised as dedicated grav cavalry or lift infantry but most are put together on a temporary basis from light infantry and transport or support units as needed.

The most potent of all Sword Worlds forces, their heavy grav armour units, are ill-suited to the present war. They are relatively slow, cumbersome and fragile compared to Imperial and Darrian equivalents, and destined to smash themselves into glorious pieces when engaging Imperial grav-mobile formations or targets equipped to defend against them. Far more effective are the grav cavalry units, which consist of infantry riding in fire support vehicles with heavier weaponry than the typical grav APC, supported by integrated light grav armour and artillery. These formations are permanently embodied as grav-cav rather than being put together in the field.

As elsewhere, extensive use is made of mobile infantry formations. These are created by pairing up an infantry unit with suitable transport. If grav transport is not available, wheeled or even tracked vehicles may be substituted. Specialist infantry formations are also fielded, notably urban combat experts and fortress units who are assigned to defend important fortified objectives.

Sword Worlds society prizes individual marksmanship highly, to the point where automatic weapons are not favoured for most troops. One of the highest honours a unit can claim is to be referred to as 'Jaegers' – sharpshooters – and there is a distinct preference for skirmishing and harassing the enemy with precise fire. This extends to armoured and artillery formations to a great extent.

SPECIAL UNITS

The term Jaeger can be applied as an honorific to almost any unit which has distinguished itself. However, units that can be described as Jaegers – in the sense that they operate as highly skilled skirmishers and sharpshooters – are also fielded. These are generally formed of volunteers from local defence militias, as those militias that call themselves Jaegers are honour-bound by long custom to offer themselves for war service.

Jaeger formations tend not to be larger than a company and are loosely organised. They are valued as skirmishers and scouts, and generally given more leeway in terms of discipline than regular soldiers. A commander who has been assigned a force of Jaegers will generally be glad to have them but also slightly apprehensive about their interactions with 'lesser' troops outside of combat operations.

Penal units are almost the opposite of Jaegers, although under Sword Worlds law no-one can be forced to enter a combat zone. Penal units are typically made up of a mix of troublemakers from army and civilian prisoners who have volunteered for service in a penal unit in return for a reduction in sentence. Penal formations are normally used for work assignments, providing support to the combat troops without requiring to be armed. However, some formations will volunteer for hazardous duty or combat operations in the hope of earning early release.

Small penal units may be formed in a war zone on an ad-hoc basis, with personnel serving a period for offences which are forgiven after a suitable target has been met. This might be a certain number of unexploded warheads located, days in an exposed front-line observation post, or some similar requirement. Larger penal units are permanent formations whose members know they are expendable, but only at need. Not all offenders are deemed suitable for a chance at redemption in this manner and as a result – generally speaking at least – the bargain remains intact even when there is no-one to enforce it.

GROUND FORCE FORMATIONS

The Sword Worlds Confederation prefers to field formations which consist of units originating from a single world, in order to minimise the effects of training and doctrinal differences. As a result, large-scale formations tend to consist of more sub-units than might be found in a more unified military system. Formations use standard definitions roughly equivalent to those found elsewhere but with some local variations. Notably, the battlegroup system results in non-standard forces in terms of both size and composition. However, peacetime organisation is generally neat and formal in order to simplify training and support.

PLUTON (PLATOON)

The smallest tactical formation used by the Sword Worlds military is the pluton, generally equivalent to a platoon in the Imperial military. A platoon usually consists of three sub-units plus a command element, such as three grav reconnaissance vehicles and a (probably identical) vehicle carrying the platoon commander. Sub-units are normally a single vehicle or a sektion (section) of around eight infantry soldiers. A platoon is normally led by a Loejtnant (lieutenant). In infantry formations it will normally have a strength of around 30–32 personnel.

LIGHT INFANTRY PLUTON

Command Sektion

Command Squad

- Pluton Commander

- Pluton Sergeant

- Pluton Marksman

- Medic

Rifle Squad

- Squad Leader (Korporal)

- Support Weapon Gunner

- Infantryman (0–2)

Infantry Sektion x3

Support Squad

- Sektion Leader (Serjent)

- Support Gunner

- Infantryman x2

Rifle Squad

- Squad Leader (Korporal)

- Infantryman x3

An infantry pluton can operate as a small self-contained combat force with a few support weapons and a designated marksman who is not a fully trained sniper but has impressive skills all the same. Sektionen are the primary manoeuvre and fire units in the face of the enemy, with personnel carrying sufficient grenades and disposable anti-armour weapons to deal with most threats they might encounter.

GRAV CAVALRY PLUTON

Grav cavalry are the most effective of Sword Worlds forces when engaging a major opponent such as Darrian or Imperial troops. Cavalry differ from lift infantry in that they contain less ground-combat personnel but have greater firepower than lift infantry. Personnel are cavalry troopers rather than infantrymen and normally fight in conjunction with their vehicles. Each vehicle and its crew is an integral part of the sektion.

A grav cavalry pluton consists of four vehicles, all variants on the same armoured transport. The command vehicle usually has extra communications and aerospace defence weapons, and the three cavalry vehicles mount support weapons capable of engaging light armoured vehicles. By preference, grav cavalry units are formed into battlegroups with light armour, creating a highly mobile reaction and striking force. They are sometimes mixed with light infantry or mobile infantry. If well handled the cavalry component of the force increases its overall performance but too often the opposite occurs as the cavalry are limited by the mobility of the infantry.



GRAV CAVALRY PLUTON

Command Vehicle

- Pluton Commander
- Pluton Serjent
- Medic
- Driver
- Gunner
- Cavalry Trooper (1–3)

Cavalry Fighting Vehicle x3

- Vehicle Commander (Serjent or Korporal)
- Driver
- Gunner
- Support Gunner
- Cavalry Trooper (3–5)

INFANTRY FORETAG [COMPANY]

The foretag is the standard building block of almost all formally organised units. A foretag is normally composed of three plutons plus a headquarters/support pluton. In a formal unit these would be of the same type but often a foretag-sized battlegroup is thrown together out of whatever forces are available. A unit of slightly greater than foretag size, or with significant additional support weapons, is usually termed a reinforced foretag until it grows large enough to be considered a battalion-sized unit.

A light infantry foretag contains a small number of light, man-portable anti-armour and anti-air weapons, usually reusable launchers for missiles shared out among the rest of the unit. The pioneer sektion is equipped similarly to infantry but trained to clear obstacles or quickly build field fortifications. The unit overall is commanded by a Kaptajn (captain) assisted by a Premierloejtnant (First Lieutenant), with the pluton loejtnants leading their own units and taking over command at need in order of seniority.

A light infantry formation of this sort can be converted into a motorised or lift infantry force by amalgamating it with a foretag-sized transport unit. Each pluton of infantry is assigned a pluton of transport and works with it whenever possible although sometimes units are swapped around. The transport foretag's headquarters and commanding officer are amalgamated with those of the infantry, with the infantry Kaptajn in command and the transport Kaptajn taking responsibility for logistics and support functions.

Command normally devolves one level down the 'teeth' unit (in this case the infantry component) before moving to the most senior 'tail' officer. Thus if the Kaptajn of the infantry unit was downed, his second in command (a Premierloejtnant) would take over rather than the transport Kaptajn, who would lead in preference to the most senior pluton Loejtnant of the infantry. His second-in-command would then take over, with command of whatever was left of the unit then devolving on the infantry pluton loejtnants in order of seniority.

FORETAGINFANTERI/LIGHT INFANTRY COMPANY

Headquarters/Support Pluton

- Command Sektion
- Anti-Armour Weapons Sektion
- Aerospace Defence Weapons Sektion
- Pioneer Sektion

Light Infantry Pluton x3

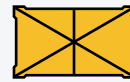
- Command Sektion
- Infantry Sektion x3

BATTELGROUP, REINFORCED FORETAG, MOTORISED INFANTRY

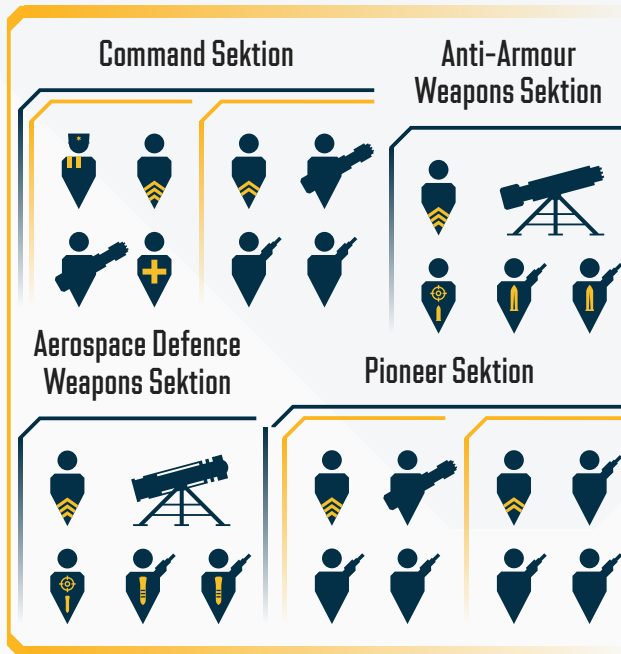
This battlegroup is typical of the sort of small unit likely to be encountered when engaging Sword Worlds forces. It would be identified to a higher commander as a 'battlegroup, reinforced foretag, motorised infantry', which tells them roughly what its capabilities are. Details are available if necessary but a commander making 'big picture' decisions only needs to know that this force can fight about as well as an infantry company with supports, and that it is limited to ground mobility.

A unit of this sort might be formed from the remnants of an infantry company or from personnel orphaned from other units. It is a temporary formation, although it may remain in service for some time. In this case a battered infantry foretag has been reformed into three weak infantry plutons. A squad of grav cavalry and their grav-mobile APC, orphaned from another unit, has been added along with a grav artillery vehicle. Two wheeled tank destroyers and an aerospace defence vehicle are also available and a wheeled APC as a command vehicle. Note that possession of a couple of grav vehicles does not make this a grav-mobile formation; it is defined by the slowest of its transports. Most of these are wheeled, so the unit as a whole is listed as motorised.

SWORD WORLDS FORETAGINFANTERI



Headquarters/Support Pluton



Light Infantry Pluton x3



KEY



Kaptajn



Loejtnant



Serjent



Korporal



Support Gunner



Medic



Infantryman



Anti-Armour Weapon



Anti-Armour Gunner



Assistant
Anti-Armour Gunner



Aerospace Defence Weapon



Aerospace Defence
Gunner



Assistant Aerospace
Defence Gunner

The unit's acting commander decides to organise this force along the lines of a composite company. The grav cavalry are assigned to the command pluton where they act as a reconnaissance force or as a reserve, possibly in conjunction with the artillery piece. Using an artillery vehicle as a substitute tank is risky but fire support is fire support. The command pluton also provides a measure of aerospace defence.

One more or less full-strength infantry pluton is available, with wheeled transport. The remaining personnel are grouped into two composite plutons, each with a tank destroyer and two weak infantry squads. There are not enough personnel to create a command sektion. Despite its ad hoc nature this little force is capable of combined arms operations and can fight tanks or defend itself against aerospace vehicles. It is combat-capable and will serve until it can be withdrawn and the constituent parts regrouped into more formally organised formations.

REINFORCED FORETAG (COMPANY) MOTORISED INFANTRY BATTLEGROUP

Command Pluton

- Wheeled APC Command Vehicle
- Wheeled Aerospace Defence Vehicle
- Recon Sektion
 - Grav Cavalry Sektion
 - Grav APC
- Artillery Sektion
 - Grav Artillery Vehicle

Motorised Infantry Pluton

- Command Sektion
- Light Infantry Sektion x3
- Wheeled APC x3

Composite Pluton x2

- Wheeled Tank Destroyer
- Understrength Light Infantry Sektion x2
- Wheeled APC x2

URBAN COMBAT BATTALJON [BATTALION]

The battalion is the smallest and also the commonest administrative unit maintained by the Confederation. The internally fragmented nature of the Confederation means that battalions have to be reasonably self-sufficient in the field. The standard organisation is three companies of the battalion's primary troop type and a headquarters/support company. The latter contains an administrative detachment which is normally left at the unit's base to handle long-term issues such as pay, retirement and direction of recruits and replacements. This staff also ensures that even if the fighting companies were somehow completely wiped out, the battalion would survive.

Battaljons usually deploy as a complete unit, forming part of a brigade or larger formation. However, they rarely stay that way for long. Thus every battalion headquarters company is capable of becoming the headquarters of a battalion-sized battlegroup containing many different unit types; battalion commanders are trained to have at least an appreciation of what other kinds of troops need to keep them in action and how best they can be used. A battalion headquarters company can, in theory at least, be put in place as the command unit of any sized force, although it would normally receive additional assets if assigned as the headquarters of a brigade or higher formation.

Urban combat battaljons such as this one are specialist units, optimised for capturing and contesting built-up areas. Its organisation follows the general pattern of an infantry formation, with one notable exception. Each company has a mobile pluton which has been provided with light grav transport. This is usually air/rafts but grav trucks are sometimes co-opted for this role. Grav mobility allows troops to be moved into and out of the upper levels of tall buildings.

Sword Worlds formations do not usually have organic transport assets, although a pool of vehicles may be assigned to the headquarters. In this case these are light wheeled ground vehicles suitable for logistics and general mobility but not combat. Other vehicles may be commandeered once the unit has secured its objectives. A force like this one will normally be tasked with grinding its way through its assigned part of a city then holding it against counterattacks or attempts at infiltration.

URBAN COMBAT BATTALJON

Headquarters & Support Foretag

- Headquarters Pluton
- Light Aerospace Defence Pluton
- Light Anti-Armour Pluton
- Engineering Pluton
- Battaljon Transport Pool

Infantry Foretag x3

- Headquarters/Support Pluton
- Security Pluton x2
- Mobile Pluton

MECHANISED BRIGAD (BRIGADE)

The brigad is the smallest strategically significant formation deployed by the Confederation. It would normally be commanded by a Brigadegeneral and contain three battaljons of its primary combat unit type, plus a support battaljon. At the beginning of a campaign a brigad might be neatly organised, but even in peacetime many are formed from available forces rather than conforming to a theoretical perfect composition.

This force is designated as being mechanised as its primary transportation type is wheeled and track-laying ground vehicles, although it does have a grav-mobile component. This consists of a foretag of light grav tanks, which along with a foretag of wheeled light armoured vehicles provides an armoured reconnaissance capability. There is also a track-mobile artillery foretag assigned to brigad HQ. A volunteer Jaeger foretag is available to the brigad commander. These units are assigned to the brigad HQ rather than attempting to create a composite battaljon out of them.

The primary troop type is mechanised infantry, using track-laying vehicles for mobility and fire support. There are two mechanised infantry battaljons, each formed by pairing an infantry unit with an armoured transport formation. The third battaljon is actually a provisional mechanised infantry battlegroup formed by rounding up remnants and reinforcements. It consists of two understrength infantry foretags, a combat engineering foretag 'borrowed' from its normal duties and a provisional foretag formed from rear-echelon personnel 'combed out' from their units.

MECHANISED INFANTRY BRIGAD

Brigad Headquarters (Brigadegeneral commanding)

- Headquarters Detachment
- Light Grav Tank Foretag
- Wheeled Armoured Reconnaissance Foretag
- Tracked Artillery Foretag
- Jaeger Foretag
- Aerospace Defence Pluton
- Security Pluton

Mechanised Infantry Battaljon x2

- Light Infantry Battaljon
- Mechanised Transport battaljon

Provisional Mechanised Infantry Battaljon

- Light Infantry Foretag x2
- Combat Engineering Foretag
- Provisional Light Infantry Foretag
- Mechanised Transport Battalion

Support Battaljon

- Headquarters/Brigade Logistics Foretag
- Mechanised Artillery Foretag
- Aerospace Defence Foretag
- Workshop Foretag

MECHANISED DIVISION

Divisions are the largest long-term Sword Worlds formations likely to be encountered. They are built around a divisional headquarters formation commanded by a Generalmajor (major-general) and containing battaljon-sized support units. Usually two or three brigads are attached and the division is identified by its primary troop type and level of mobility. Whether a division is identified as mechanised or motorised depends mainly on whether its vehicles are armoured or soft-skinned. If a significant proportion of the vehicles are capable of surviving small-arms fire (at the least), the unit will be designated mechanised. Only units in which all transportation is grav vehicles are designated 'lift' or 'grav'.

Sword Worlds divisions are formed from whatever forces are available and while there is a standard model it is rarely followed exactly. This mechanised division is intended to conduct aggressive operations against Imperial forces and is built on the premise that sub-units need to remain combat-capable no matter how badly disrupted the overall force might be. For this reason most of the divisional artillery reserve is distributed among the three combat brigads. While this makes it difficult to provide concentrated artillery support, it does make it more likely that some artillery will remain available.

Other than being assigned additional artillery, two of the division's brigades are standard mechanised infantry forces. The third is set up to act as a support and pivot for the others, and contains more defensively oriented formations. These include an urban combat formation, some artillery and aerospace defence troops, and a composite anti-armour unit containing tank destroyers and heavy weapons-equipped infantry. The divisional HQ has significant combat power of its own and might join the fighting as a unit or detach battlegroups to deal with crises or to exploit opportunities.

MECHANISED DIVISION

Divisional Headquarters

Headquarters Battalion

- Headquarters Foretag
- Aerospace Defence Foretag
- Headquarters Security Foretag
- Divisional Intelligence Foretag
- Mechanised Infantry Foretag

Divisional Artillery Reserve

- Artillery Reserve Headquarters
- Aerospace Defence Battery
- Artillery Battery
- (Artillery Battery Dispersed to Mechanised Brigads x2)
- Artillery Reserve Support Battalion

Mechanised Infantry Brigade x2

- Brigade Headquarters
- Light Infantry Battalion x3
- Mechanised Transport Battalion x3
- Brigade Support Battalion

Mechanised Brigade

- Brigade Headquarters
- Light Infantry Battalion
- Urban Combat Battalion
- Composite Anti-Armour Battalion
- Mechanised Transport Battalion x3
- Composite Aerospace Defence/Artillery Battalion
- Brigade Support Battalion

HIGHER FORMATIONS

The equivalent of corps and armies are formed on a temporary 'big battlegroup' basis around a core which closely resembles an enlarged divisional HQ, or are commanded from one of the divisional headquarters within the larger formation. This places a significant burden on the command staff but not usually for very

long. Against a powerful foe like the Imperial Army it is likely a corps or even an army will find itself throwing battlegroups together from heavily damaged formations and fighting in an uncoordinated manner thereafter. The pragmatic Sword Worlders accept this as inevitable and prefer not to invest too much in higher organisational structures that are likely to be quickly disrupted.

KAR [CORPS]

A Kar is formed of two or more divisions and supporting forces, or from an equivalent number of brigades and battlegroups not formed into formal divisions. A Kar is normally commanded by a Generalloejtnant (lieutenant-general) and has no fixed composition. A small Kar would contain 20–25 battalion-equivalents, usually grouped into brigades and divisions on at least provisional lines, with typical strength nearer 40–50 battalion-equivalents. A mix of forces is desirable, ensuring that a Kar can put combined-arms battlegroups into action at many points within its area of operations and in sufficient strength to overcome their opponents.

SLAGFALTET [BATTLE FRONT/ARMY]

A Slagfaltet, or 'battle front', is composed of two or more Kar plus supporting forces, under the command of a General. Other militaries would use the word 'army' for this size of force. A slagfaltet would contain at least 100 battalion-equivalent units – probably far more – organised and commanded at the Kar, Division and Brigade level.

At this scale, a formation is largely administrative and logistical in function. The slagfaltet commander will draw up contingency plans and ensure subordinates understand them, but once battle is joined command will devolve to a lower level. The overall command staff will try to provide timely intelligence and direction, and to ensure reinforcements go to the right place, but the Confederation accepts that micromanagement from on high is a recipe for additional confusion.

The most senior echelon of command really shows its worth after a battle, when it must sort out all the ad-hoc battlegroups and get the force back under proper control. Those units too battered to fight – whatever they may claim – must be brought out of the combat zone to regroup and refit. The decision whether to pull a given unit out is a difficult one but can make the difference between long-term effectiveness and a sudden collapse.

GROUND FORCES OF THE DARRIAN CONFEDERATION

The Darrian Confederation for the most part follows Imperial practice and uses Imperial weaponry or copies of it. There are exceptions to this rule, however. The Confederation's army contains a greater proportion of battle dress equipped units than other militaries. The high cost is offset by greater effectiveness when used correctly and by the fact that the Darrian military is smaller in terms of percentage of the population.

The big drawback with battle dress is the high maintenance requirement to keep it effective. Battle dress equipped units need to stay close to support facilities, and even so suffer from availability issues. Darrian units report an average of 97% serviceability in peacetime, and in a war situation where defects that would sideline a suit can be tolerated for the time being this figure approaches 100% when a unit first arrives in the theatre of war.

Damage and general wear will reduce serviceability over time but this must be balanced against the greater protection and offensive power afforded by the suits. A battle dress trooper can survive hits that would kill someone in lesser armour and suits can be repaired where the experience of a dead soldier is lost forever. The Darrian Confederation considers the bargain worth it.

The Darrian home defence forces are often referred to as the Confederation Militia. Each world has its own formations which will probably never serve anywhere else, while the Confederation Guard is a mobile force capable of conducting offensive operations or reinforcing the militia. The militia is capable of conducting a tough defence but its commanders take the long view – it is better to concede an objective and maintain the force in being than to fight a hopeless battle for the sake of honour or pride.

Many militia units are formed from part-time soldiers but all train to a high standard. Both the militia and the guard favour sudden strikes and rapid counterattacks over set-piece battles. An advancing enemy can be

met head-on but ideally the offensive will be disrupted by strikes on command assets and along its line of supply, to the point where it peters out or becomes vulnerable to a counterstroke.

Darrians are experts at finding weak points and fighting in an unpredictable manner. They are also pragmatic about territory. With few exceptions a place that has come under attack is considered a battleground rather than a possession. The Darrian military will abandon a city rather than taking unacceptable losses trying to hold it, and are similarly slippery in the field. If possible they will evade an attack, allowing some of its force to dissipate due to the inevitable friction of war. This process is enhanced by extensive electronic and cyber warfare, and the use of decoy units and diversionary operations.

It has been said that fighting Darrians is like chasing shadows in a minefield and any invaded world will become what one Imperial general referred to as 'a full-service quagmire'. A defeated force will scatter and begin a campaign of harassment until relieved. This is practiced regularly in exercises intended to prepare soldiers for the eventuality of defeat. It is not that the Darrians are preparing to lose a war so much as ensuring they can continue fighting so long as there are still rocks to throw.

CONFEDERATION MILITIA LIFT INFANTRY COMPANY

Although organised along the same lines as an Imperial infantry company, a Darrian militia force expects to fight on its home territory and among a friendly population. It might send some elements elsewhere for joint exercises or even to assist other militia, but in all likelihood personnel will be fighting on terrain they are intimately familiar with.

The company is organised as the usual three combat platoons and a headquarters/support platoon, each with its own integrated grav transport. Some personnel are part-timers but the unit as a whole is permanently

embodied and well trained. The main difference between this and an Imperial formation is the addition of a fire support vehicle to each platoon. These three vehicles replace the two found in the support platoon of the equivalent Imperial formation. Their place is taken by two more grav APCs, one carrying a technical section and one a sharpshooter section.

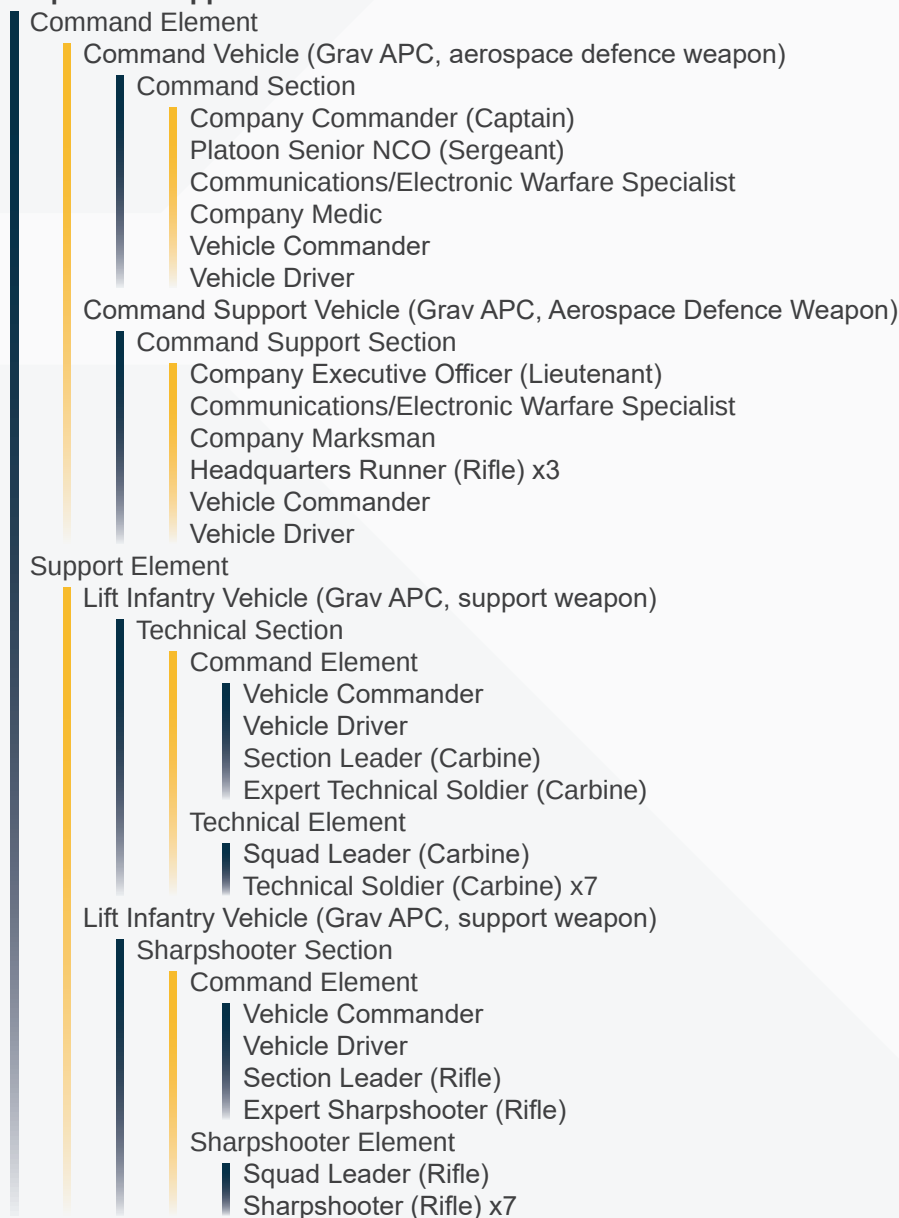
The technical section lies somewhere between combat engineers and equipment technicians. They are adept at using the resources of a built-up area to obtain information – such as by tapping into civilian

sensor systems such as security cameras – and to improvise obstacles and hazards for the enemy. The technical section also operates reconnaissance drones and solves whatever problems the unit commander directs them towards.

The sharpshooters are not fully trained snipers, in that they are not required to have the same level of observation and stealth skills a qualified sniper needs. They do train in locating and eliminating enemy snipers, especially in urban terrain, and will usually be dispersed among the other platoons to provide accurate long-range fire when needed.

DARRIAN CONFEDERATION LIFT INFANTRY COMPANY

Headquarters/Support Platoon



Lift Infantry Platoon x3

Command Element

Command Vehicle (Grav APC, aerospace defence weapon)

Command Section

Platoon Commander (Lieutenant)

Platoon Senior NCO (Sergeant)

Communications Specialist

Platoon Medic

Platoon Marksman

Missile Gunner

Assistant Missile Gunner

Vehicle Commander

Vehicle Driver

Fire Support Vehicle

Vehicle Commander

Vehicle Driver

Support Weapon Crew

Lift Infantry Vehicle (Grav APC, support weapon) x3

Rifle Section

Command Element

Vehicle Commander

Vehicle Driver

Section Leader (Rifle)

Designated Grenadier (Rifle)

Rifle Element

Squad Leader (Rifle)

Rifleman (Rifle) x3

Support Element

Squad Leader (Rifle)

Support Gunner (Support Weapon)

Assistant Gunner/Loader (Rifle) x2

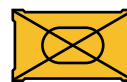
Support Vehicle (Grav Vehicle Fire Support Weapon) x2

Vehicle Commander

Vehicle Driver

Support Weapon Crew

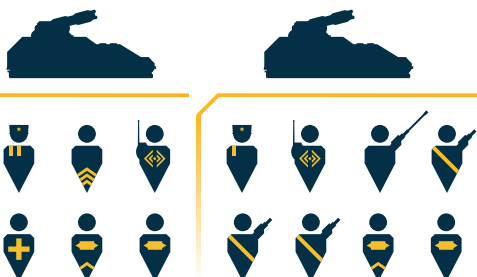




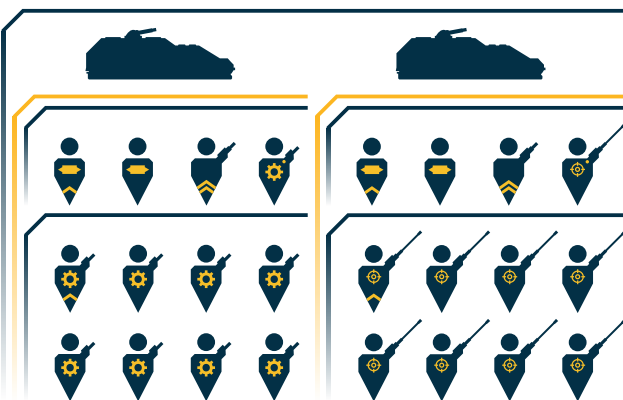
DARRIAN CONFEDERATION LIFT INFANTRY COMPANY

Headquarters/Support Platoon

Command Element

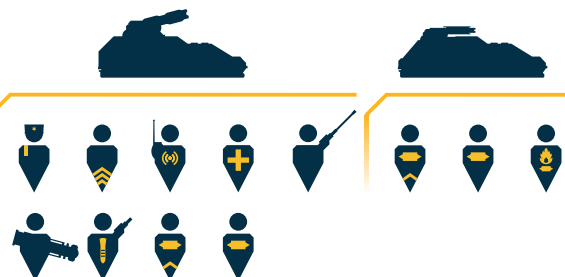


Support Element

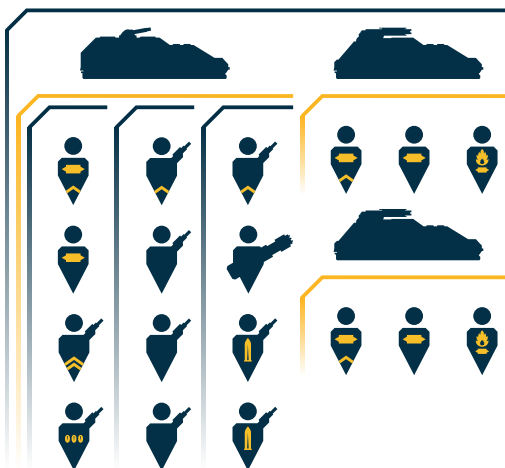


Lift Infantry Platoon x3

Command Element



Lift Infantry Vehicle x3



KEY



Grav APC, Aerospace Defence Weapon



Grav APC, Support Weapon



Grav Vehicle, Fire Support Weapon



Communications/
Electronic Warfare Specialist



Rifleman



Assistant Gunner/Loader



Communications
Specialist



Grenadier



Technical Soldier



Captain



Corporal



Sharpshooter
Squad Leader



Medic



Missile Gunner



Expert Technical
Soldier



Lieutenant



Squad Leader



Vehicle
Commander



Marksman



Assistant Missile
Gunner



Sharpshooter



Sergeant



Technical
Squad Leader



Vehicle Driver



Headquarters
Runner



Support Gunner



Expert
Sharpshooter

CONFEDERATION GUARD ADVANCED COMBAT BATTALION

Where the majority of the Confederation's combat forces are armed and organised according to the Imperial model, the advanced combat battalions are not. Each is made up of a mix of battle dress equipped infantry ('armoured infantry' in Darrian parlance) and their transports. These are expensive TL15 transport/gunships, each carrying four battle dress equipped infantry soldiers.

The standard mode of combat for these units is a rapid strike, with battle dress equipped troops jumping from their vehicles using grav parachutes. The transports may retire to a larger area or remain overhead giving fire support. Exfiltration is usually accomplished by clearing the immediate area of hostiles and calling the transports in, although sometimes a unit must fight its way clear. Either way, advanced combat operations are characterised by chaos and massive firepower, with little opportunity for complex evolutions once combat is joined.

Advanced combat troops are trained to fight in small teams, which start out as neat groups of four but are likely to degenerate into a free-for-all in which troopers who happen to be close to one another work together as best they can. Rank and the chain of command are largely irrelevant in this situation. What matters is boldness and ad hoc teamwork.

The battalion contains three advanced combat companies, each with organic transport and support, and a headquarters company which provides planning and technical support to the fighting companies. There are no fire support or artillery vehicles in the battalion core, although it does have some aerospace defence weapons and a security platoon. The hugely expensive maintenance and support equipment is kept as far away from the fighting as possible.

Within the combat companies there is a minimal command staff comprising the company commander and executive officer and a handful of battle dress equipped troopers who perform admin tasks when not destroying everything in sight. In action these personnel fight like any other trooper in the unit. The three platoons in each company each contain three sections of four vehicles, each with four troopers ready to drop. Total fighting strength of each platoon is 12 vehicles and 36 troopers.

ADVANCED COMBAT BATTALION

Headquarters/Support Company

- Battalion Headquarters
- Intelligence and Planning Detachment
- Security Platoon
- Medical Platoon
- Battle Dress Support Platoon
- Service Platoon

Advanced Combat Company x3

- Company Headquarter
 - Command Grav Gunship/Transport x2
 - Company Commander
 - Company Executive Officer
 - Battle Dress Trooper x6
- Advanced Combat Platoon x3
 - Platoon Headquarter Vehicle
 - Advanced Combat Section x3
 - Grav Gunship/Transport x4
 - Battle Dress Trooper x4

HAVEANA GRAV TRANSPORT/GUNSHIP

A Darrian design, the *Haveana* is also in service with a handful of Imperial units. These do not use it in its intended role as support and transport for battle dress equipped units, but instead replace the delivery cocoons with space for more conventionally equipped personnel. In that role a *Haveana* can carry six combat armoured infantry or up to 12 people with little room to move.

The crew of two sit in a tandem cockpit at the front of the vehicle. The VRF gauss gun is mounted just behind them on the dorsal surface, whilst the laser cannon is slung under the vehicle for the ground-attack role. The crew and passengers are protected by ejection cocoons and a full NBC-protection suite which also allows the vehicle to operate on hostile worlds. Access is normally by way of the rear airlock but troops can be delivered by ejecting their cocoons individually or all at once. These must be replaced after a mission but given the expense of battle dress the cost of delivery is considered trivial.

The *Haveana* is a gunship rather than a tank. It is intended to provide fire support for its troops from a low altitude, moving slowly between positions of cover behind buildings and terrain. The positioning of the laser makes hull-down shooting impossible but does allow precise fire against ground targets. The command variant is almost identical and indistinguishable from outside the vehicle.

Haveana Grav Transport/Gunship

TL	15
SKILL	Flyer (Grav)
AGILITY	+4
SPEED (CRUISE)	Very Fast (Fast)
RANGE (CRUISE)	6,000 (12,000)
CREW	2
PASSENGERS	4
CARGO	680kg
HULL	120
SHIPPING	30 tons
COST	MCr10.249
TRAITS	—

EQUIPMENT

Anti-Missile System (advanced laser), Autopilot (advanced), Communications System (advanced, encrypted, increased range), Computer/3, Control Systems (advanced), Decoy Dispenser, Ejection Cocoons x6, Fire Extinguishers, Hostile Environment, Life Support (short term), Navigation System (improved), Sensors (advanced, hardened)

Autopilot (skill level)	3
Communications (range)	10,000km
Navigation (Navigation DM)	+4
Sensors (Electronics (sensors) DM)	+2
Camouflage (Recon DM)	-4
Stealth (Electronics (sensors) DM)	—

WEAPONS

Small Turret (light laser cannon)
Small Turret (VRF gauss gun)

ARMOUR

Front	50
Sides	50
Rear	50
Top	50
Underside	50



WEAPON	RANGE	DAMAGE	MAGAZINE	MAGAZINE COST	TRAITS	FIRE CONTROL
Light Laser Cannon	2	8D	—	—	AP 5	+4
VRF Gauss Gun	1	4D	400	Cr1000	AP 5, Auto 8	+4

INDEX

WARFARE

Aerospace Formations.....	036
Artillery Formations.....	034
Attrition.....	022
Battles and Firefights.....	016
Carrying Stuff.....	008
Cavalry Formations.....	035
Enemy Fire Effect.....	018
Field Kit, Planetary Army of Jewell	
Lift Infantry Soldier.....	014
Fire and Shock.....	034
General Officer Equivalency.....	041
Grand Strategy, Strategy and Tactics.....	021
Hostile Environment Formations.....	037
If You're Going to Draw Fire.....	018
Infantry Firepower.....	032
Infantry Formations.....	032
Manoeuvre Strategy vs Attritional Warfare.....	024
Marine Formations.....	037
Maritime Formations.....	037
Military Campaigns.....	015
The Consultants.....	016
The High-Level Campaign.....	015
The Orphaned Soldiers.....	015
Military Grav Vehicles.....	010
G-Carriers.....	011
Grav Combat Vehicles.....	012
Grav Gunship.....	013
Grav Sleds.....	012
Grav Speeder.....	013
Grav Tank Destroyer.....	013
Light Grav Tank.....	013
Light Grav Vehicles.....	011
Main Battle Tank.....	013
Softskinned Transport.....	010
Mobility, Protection and Firepower.....	035
Network-Centric Warfare.....	022
Nuclear and Biochemical Warfare.....	028
Officer Rank Equivalency.....	040
Opposing Doctrines.....	019
Psionics.....	030
Radiation and Fallout.....	030
Rank and Military Tradition.....	038
Rules of Engagement.....	009

Supporting Formations.....	037
Teeth and Tail.....	032
Terminology and Generalisation.....	004
The Noisy Fourth Dimension.....	028
Unit Sizes.....	031
Zones, Not Lines.....	003
Zone Types.....	006

WEAPONS AND EQUIPMENT

Aerospace Defence Weapons.....	072
Area Defence.....	075
Close-In Defence.....	073
Planetary Defence.....	077
Point Defence.....	073
Theatre Defence.....	076
Anti-Armour and Aerospace Defence.....	054
Artillery Mass Drivers.....	068
Artillery Rocket Systems.....	067
Battlefield Energy Weapons.....	070
Battle Management Systems.....	044
Hand Weapons.....	047
Imperial Army Personal Armour.....	058
Imperial Battle Dress.....	060
Imperial Marine Weapons.....	057
Imperial Small Arms: The ACR Family.....	050
Infantry Drone Systems.....	045
Low-Gravity Weapons.....	056
Military Sidearms.....	048
Obscurants.....	044
Soldier-Portable Jammers and Decoys.....	045
Support and Vehicular Weapons.....	064
Sword Worlds Personal Armour.....	060
Sword Worlds Small Arms.....	053
Tools and Enablers.....	042
Climbing Kit.....	043
Cord and Anchor.....	043
Entrenching Tool.....	043
Grav Belt.....	043
Utility Items Pack.....	043
Vehicle-Mounted Projectile Weapons.....	066
Zhodani Battle Dress.....	064
Zhodani Infantry Weapons.....	051
Zhodani Personal Armour.....	060

THIRD IMPERIUM

Aerospace Defence Regiment	106
<i>Alligator</i> Grav Gunship	120
Armoured (Grav Tank) Squadron	110
<i>Bergstrom</i> Light Grav Tank	110
<i>Brize</i> Light Grav Vehicle	082
Composite Aerospace Warfare Brigade	119
<i>Concetta</i> Artillery Sled	108
<i>Deneb</i> Light Grav Tank	102
Imperial Army Armoured Brigade	118
Imperial Army Division (Armoured)	123
Imperial Army Division (Lift Infantry)	123
Imperial Army Independent Brigade (Lift Infantry)	114
Imperial Equipment and Armament	080
Imperial Lift Infantry Company	095
Doctrine: Lift Infantry Company Attack	098
Lift Artillery Regiment	104
Lift Infantry Battalion	101
Lift Infantry Platoon	093
Doctrine: Lift Infantry Platoon Encounter	094
<i>Makamda</i> Main Battle Tank	112
<i>Mongoose</i> Attack Speeder	120
Other Formations	124
Personal Forces of the Nobility	081
Planetary Armies	080
Rapid Interface Battalion	114
Sector and Subsector Commands	084
Aramis	086
Five Sisters	090
Glisten	091
Jewell	085
Lanth	087
Lunion	089
Mora	089
Regina	086
Rhylanor	088
Sword Worlds	089
Trin's Veil	091
Vilis	086
Small-Unit Organisation	092
Doctrine: Handling an Infantry Section	092
Imperial Infantry Section	092
<i>Teamster</i> Logistics Vehicle	116
The Imperial Corps of Rangers	124
The Imperial Marine Corps	081, 125
The Regimental System	078
Attached Formations	080
Contributed Formations	079
Imperial Formations	079
The <i>Torana</i> Family of Grav Vehicles	099

ZHODANI CONSULATE

Combat Transport Vehicle	137
Combined Arms and Warbot Integration	129
Committed Forces	132
Distant Flank Security Force	146
Doctrine: The System of Five	130
Force Creation	132
Higher Formations	148
Light Artillery Sled	146
Militarised Air/Raft	142
Planetary Armies and Occupation Forces	148
The Consular Guard	152
The Special Naval Landing Force	152
Vanguard/Armoured Reconnaissance Groupment	144
Z-66 Light Grav Tank	144
Z-80 Main Battle Tank	150
Zhodani Consulate Infantry Group	134
Zhodani Consulate Infantry Squadron	134
Zhodani Consulate Occupation Squadron	139
Zhodani Consulate Warbot Squadron	140
Zhodani Doctrine	126
Zhodani Rifle Groupment	140

SWORD WORLDS CONFEDERATION

Battlegroup, Reinforced Foretag	
Motorised Infantry	156
Grav Cavalry Pluton	155
Ground Force Formations	154
Higher Formations	160
Infantry Foretag (Company)	156
Mechanised Brigad (Brigade)	159
Mechanised Division	159
Special Units	154
Urban Combat Battalion (Battalion)	158

DARRIAN CONFEDERATION

Confederation Guard Advanced Combat Battalion	165
Confederation Militia Lift Infantry Company	161
<i>Haveana</i> Grav Transport/Gunship	165

THE FIFTH FRONTIER WAR

ARMIES OF THE FIFTH FRONTIER WAR

Armies of the Fifth Frontier War details the organisation, equipment and doctrine of the major belligerents – the Third Imperium, Zhodani Consulate, Sword Worlds Confederation and Darrian Confederation. Vehicles, personal armour and weaponry are detailed, along with their role in the belligerent powers' arsenal.

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